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Process innovation through alpha contracting: an analysis of Department of Defense service contracts

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THESIS

PROCESS INNOVATION THROUGH ALPHA CONTRACTING: AN ANALYSIS OF DEPARTMENT OF DEFENSE SERVICE CONTRACTS

by

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The focus of acquisition reform is not only to obtain a better product for the Department of Defense (DoD), but also to improve or innovate the actual process of acquiring defense systems and services. This thesis critically analyzes the DoD service contracting process with a focus on innovation through alpha contracting as a redesign enabler. Service contracting is increasingly important as the DoD shifts to contractor support with the many unique characteristics requiring special attention that service contracting entails. Data gathered from field research and interviews are employed to support comparative process analysis of eight service contracting process flows. Innovation analysis of these eight processes is employed to redesign the service contracting process through alpha contracting. Both positive implications and potential inhibitors to alpha contracting are discussed, as well as mechanisms to overcome the inhibitors. To generalize the results of this research, a decision model is developed to assist acquisition managers in assessing the likelihood of alpha contracting success.

The thesis concludes that alpha contracting can innovate the service contracting process and offers suggestions for future research along these lines.

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PROCESS INNOVATION THROUGH ALPHA CONTRACTING: AN ANALYSIS OF DEPARTMENT OF DEFENSE SERVICE CONTRACTS

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The focus of acquisition reform is not only to obtain a better product for the Department of Defense (DoD), but also to improve or innovate the actual process of acquiring defense systems and services. This thesis critically analyzes the DoD service contracting process with a focus on innovation through alpha contracting as a redesign enabler. Service contracting is increasingly important as the DoD shifts to contractor support with the many unique characteristics requiring special attention that service contracting entails. Data gathered from field research and interviews are employed to support comparative process analysis of eight service contracting process flows. Innovation analysis of these eight processes is employed to redesign the service contracting process through alpha contracting. Both positive implications and potential inhibitors to alpha contracting are discussed, as well as mechanisms to overcome the inhibitors. To generalize the results of this research, a decision model is developed to assist acquisition managers in assessing the likelihood of alpha contracting success.

The thesis concludes that alpha contracting can innovate the service contracting process and offers suggestions for future research along these lines.

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A. PURPOSE

This thesis provides an analysis of alpha contracting as an enabler to innovate the Department of Defense (DoD) service contracting process. A detailed discussion of the unique features of the DoD service contracting process is presented. The possibilities of innovation are explored, specifically, through application of alpha contracting techniques.

B. BACKGROUND

Reform has swept across most aspects of the acquisition process and has affected nearly every one of the players involved in the acquisition workforce. Mandated by the Federal Acquisition Streamlining Act (FASA), the focus in acquisition reform is not only to obtain a better product for the DoD, but also to improve the process of acquiring defense systems and services.

A key reform initiative looks to streamline the contracting process. The Federal Acquisition Regulation (FAR) discusses exercising initiative when streamlining a process in its Statement of Guiding Principles for the Federal Acquisition System. The FAR states:

> Government members of the Acquisition Team may assume if a specific strategy, practice, policy or procedure is in the best interests of the Government and is not addressed in the FAR, nor prohibited by law (statute or case law), Executive order or other regulation, that the strategy, practice, policy or procedure is a permissible exercise of authority [Ref. 19]

One enabler of acquisition reform and streamlining in Government contracting is alpha contracting. Alpha contracting is a method of procurement that uses the teaming concept between an industrial partner and the Government to develop proposals, contracts and products. Encouraging early reports of cost savings, quality improvements and dramatic cycle-time reductions suggest that alpha contracting offers excellent potential to innovate a wide variety of defense contracting processes. This study concentrates in particular on the key area of innovating the service contracting process. Innovation implies a radical change to a process versus an adjustment or improvement to the process in place.

Service contracting has unique characteristics compared to other contracting processes. For example, in a traditional supply contract the buyer has the ability to use military specifications or engineering designs to express the desired purchase. Service contracts, on the other hand, are more difficult to express exactly the quantity and quality of the duties desired by the potential contractor. The unique characteristics found in service contracting offer potential for the service contracting process to benefit from the application of alpha contracting techniques.

C. RESEARCH QUESTIONS

1. Primary Research Question

How can alpha contracting be employed to innovate the DoD service contracting process?

2. Secondary Research Questions

1. What is the DoD traditional sole-source contracting process?

2. What is the alpha contracting process?

3. What are the relative benefits and disadvantages currently attributed to the alpha contracting process?

4. What is unique about the DoD service contracting process compared to other contracting areas?

5. What are the potential enablers and inhibitors to applying alpha contracting to innovate the service contracting process?

6. How can the potential inhibitors to applying alpha contracting to innovate the service contracting process be addressed or overcome?

7. What aspects of a program, contract, contractor and contracting environment are expected to contribute to alpha contracting success or failure in innovation of the service contract process?

D. SCOPE

The audience for this thesis includes DoD policy makers, program managers and contracting officers. This thesis addresses service contracting problems from a process innovation perspective. It describes the relative benefits and disadvantages currently attributed to the alpha contracting process in DoD sole-source contracts and describes the traditional DoD sole-source contracting process, paying particular attention to any uniqueness of service contracting. The main emphasis of this thesis is an analysis of service contracting for process innovation and further to describe enablers and inhibitors of innovating the DoD service contracting process through alpha contracting.

E. METHODOLOGY

A process-innovation framework is used for analysis of the relative similarities, differences, pathologies and innovation opportunities of traditional sole-source and alpha contacting processes. Data were collected through two primary methods, literature review and interviews. An extensive review of literature was conducted on the topics of alpha contracting, process innovation, and DoD service contracting. Literature was obtained from the Dudley Knox Library, the Defense Logistics Studies Information Exchange (DLSIE) and the World Wide Web. This included current publications, periodicals, articles, case studies, Federal regulations and previous theses.

Interviews were conducted with persons familiar with both alpha contracting and the DoD service contracting process. These interviews were conducted to gather informa-tion on the benefits currently ascribed to the alpha contracting process. Interviews were also conducted to gather data from Government contracting officers on their personal views of uniqueness or problems they have encoun-tered in the service contracting process compared to other contracting areas. Finally, interviews were conducted to gain a better understanding, at a policy level, of possible alpha contracting applications to innovate the service contracting process.

F. ORGANIZATION

Chapter II follows this introduction and reviews both the traditional DoD sole-source and alpha contracting processes and summarizes Davenport's approach to process innovation.

In Chapter III, the DoD service contracting process is examined for any unique characteristics from other contracting areas. Data gathered from literary research and interviews are consolidated in a comparative process analysis of the service contracting process. The comparative process analysis is conducted via Davenport's High Level Approach to Process Innovation. Possible enablers for innovation of the DoD service contracting process are discussed. Analysis of the service contracting process is conducted and redesign of the process is presented, inclusive of alpha contracting concepts, as a prototype model.

Chapter IV illustrates the positive implications and potential inhibitors in the application of alpha contracting to innovate the service contracting process. Possible ways to overcome the potential inhibitors are also discussed. The chapter addresses aspects of the contracting environment that the contracting officer, program manager or policy maker should expect to contribute to the success or failure in applying alpha contracting to the service contracting process.

Chapter V summarizes key conclusions and presents recommendations for further research.

G. BENEFITS OF STUDY

This thesis provides a clear and concise depiction of the potential enablers and inhibitors to applying alpha contracting techniques to innovate the service contracting process. This thesis can be used by contracting officers, program managers and policy makers to determine if the circumstances surrounding a particular acquisition scenario are conducive to applying alpha contracting to their specific acquisition process.

II. BACKGOUND

A. INTRODUCTION

The DoD spent over $272 billion on supplies, services, personnel and construction during fiscal year 1997 alone. To place this figure in perspective, the 1997 Defense spending is approximately 3.4 percent of the entire 1997 United States Gross Domestic Product (GDP)[Ref. 8]. The Congressional Budget Office projects that Defense spending will amount to $269 billion in fiscal year 1998 [Ref. 8]. These billions of dollars spent each year by DoD within private industry are outlayed via a contracting process guided by the FAR. The FAR gives both Government and industry acquisition professionals structure to contract for supplies and services alike.

This chapter presents an overview of the traditional DoD sole-source contracting process. A similar overview of the alpha contracting process is then presented for comparison. A high-level summary of benefits generally associated with contracting is also included, along with Davenport's framework for process innovation.

B. TRADITIONAL SOLE-SOURCE CONTRACTING PROCESS

Competition in contracting is fundamental to the Government both paying a fair price and receiving the best value for the product or service purchased. Any type of noncompetitive Government contracting process is a departure from Federal law. On April 1, 1985 the Competition In Contracting Act (CICA) mandated the use of full and open competition for the contracting process [Ref. 49]. This

specific authority is found in 10 United States Code 2305 (b).

There are some situations in which purchasing a product or service directly from a single source is necessary. According to the FAR there are seven circumstances that permit the use of other than full and open competition [Ref. 19:subpart 6.302]:

1. Only one responsible source and no other supplies or services will satisfy agency requirements.

2. Unusual or compelling urgency.

3. Industrial mobilization; engineering, developmental or research capability; or expert services.

4. International agreement.

5. Authorized or required by statute.

6. National security.

7. Public interest.

If the contracting officer believes a particular procurement falls within one of the seven circumstances, he can not begin negotiations with the contractor until three actions are taken. The contracting officer must justify in writing the use of sole-source, certify the accuracy and completeness of the justification and obtain the required approval [Ref. 19:subpart 6.303].

Approval authority for sole-source depends on the proposed monetary amount of the contract. If the proposed contract does not exceed $500,000 the contracting officer may certify approval. For amounts over $500,000 but not exceeding $10,000,000, the competition advocate for the procuring activity must certify. Proposed contracts over $10,000,000 but not over $50,000,000 must be certified by

the head of the procuring activity or a designated flag level (GS16 equivalent) officer. If the contract is proposed at over $50,000,000 only the senior procurement executive of the agency may certify [Ref. 19:subpart 6.304].

Sole-source procurement, while not the preferred method for U.S. Government contracting, is a large part of the Federal acquisition process today. In 1990, a statistical study performed by the Federal Procurement Data Center indicated that 32.8 percent of DoD procurement dollars were awarded on a noncompetitive basis [Ref. 49]. This thesis refers to this noncompetitive process as the "traditional sole-source contracting process". A general example of the traditional sole-source process is depicted in Figure 1.

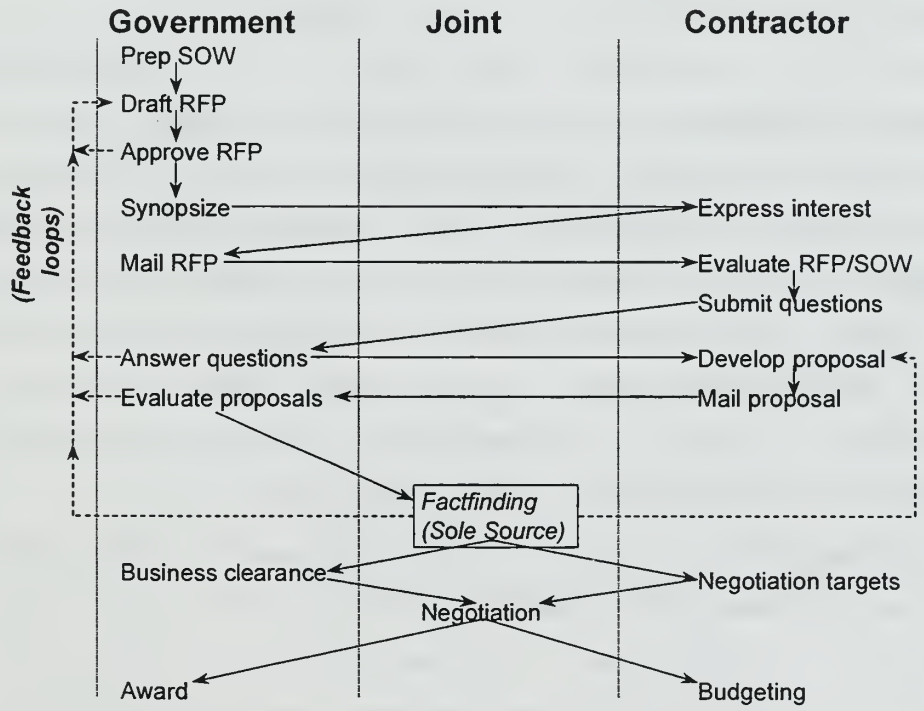

Figure 1. Traditional Sole-Source Contracting Flow [Ref. 40]

Once sole-source procurement is justified (by one of the seven criteria mentioned above) and approved, the traditional process works much like any other negotiated contract except that the process involves only a single offeror. The end user, with assistance from the program office, prepares a Statement of Work (SOW) and Purchase Request (PR) and forwards it to the procurement office. The information forwarded from the program office includes any specifications needed and data required for the user.

At the procurement office the contracting officer reviews the requirements. The PR is usually delegated to contract specialists and purchasing agents who translate the requirements into a draft Request for Proposal (RFP). After integrating the complete proposal, the contracting officer reviews it, approves the RFP and forwards it to the contractor.

Once the contractor receives the RFP, the proposal preparation process is started. The proposal is divided among the contractors' functional areas for evaluation. After thorough assessment, the contractor consolidates questions on the RFP and submits them back to the Government. After staffing the questions asked, answers from the program and contracting offices are sent back to the contractor. Finally, a proposal is developed by the contractor and forwarded to the Government.

The proposal, once in the Government's possession, is disseminated among the staff for technical, cost and price evaluation. Government representatives choose between sending the contract to the Defense Contract Audit Agency (DCAA) for cost and pricing evaluation, if necessary, or evaluating the proposal within the contracting office.

After initial evaluation, a fact-finding meeting takes place between the Government and contractor for discussions and clarifications on the contract. This is the first face to face meeting conducted in the process. After the fact-finding meeting the contractor agent's regroup to produce target figures and prepare negotiation tactics. The Government contracting officer develops objectives, positions, strategy and tactics while preparing his team for negotiations. The negotiation meeting or meetings are then scheduled.

Tweaking of the formal documents (e.g., SOW, RFP) and additional memorandum questions further lengthen this process. The formal documents may go through numerous iterations of pen changes before both sides agree with their contents. This process within a process shown in Figure 1 as the feedback loops exacerbates the "over the fence" effects.

At the negotiation meetings, the Government contracting officer's team arrives with minimum and maximum allowable levels prepared in the pre-Negotiations Business Clearance Memorandum. The contractor agents typically receive similar approval from corporate executives. This is a team against team process with both teams working towards their targets. Information is only shared between teams if it is part of the negotiation process [Ref. 16]. To share information may lead to the opposing team moving the final objective of the handshake towards their target goal.

If all goes well through negotiations, the Government awards the contract. The contractor separately produces internal budgets. This process of sending information back

and forth "over the fence" can be arduous and lengthy. Much of the work performed by both parties is completed independently. Additionally, representatives for the meetings may not always be the same. The longer this process takes the higher the risk of proposal changes, such as shifts in market price of direct materials or direct labor needed for the contract. This lengthy process can lead to strains on both the Government and contractor relationships.

C. ALPHA CONTRACTING PROCESS

Sole-source acquisition, though not the preferred means of procurement, is still a necessary and very important aspect of contracting. When the Government needs a new piece of technology and only one company owns the technology, for example, sole-source represents the only viable approach. With continued consolidation of defense firms, the need for sole-source procurement becomes increasingly likely. Yet we strive to streamline this costly and time consuming traditional sole-source contracting process from above. Alpha contracting represents an innovative approach to streamlining the sole-source contracting process.

Alpha contracting is actually a part of the Integrated Process and Product Development (IPPD) process [Ref. 34]. An attempt is made to bring down barriers between Government and industry through a partnering or teaming environment. This partnering takes place through use of Integrated Product Teams (IPTs). Alpha contracting is a term used by the Marine Corps, Navy and Army. The Air Force uses the term Review-Discuss-Concur (RDC) for the

same conceptual process. In alpha contracting, representatives from both the Government and contractor form an IPT to jointly perform the contracting process. Typically, on a large procurement, representatives from DCAA, Defense Contract Management Command (DCMC), the Government program office and the contracting officer combine with the contractor representatives to form the IPT [Ref. 23]. The Government program office also advocates the end user requirements. This streamlined alpha contracting process is depicted in Figure 2.

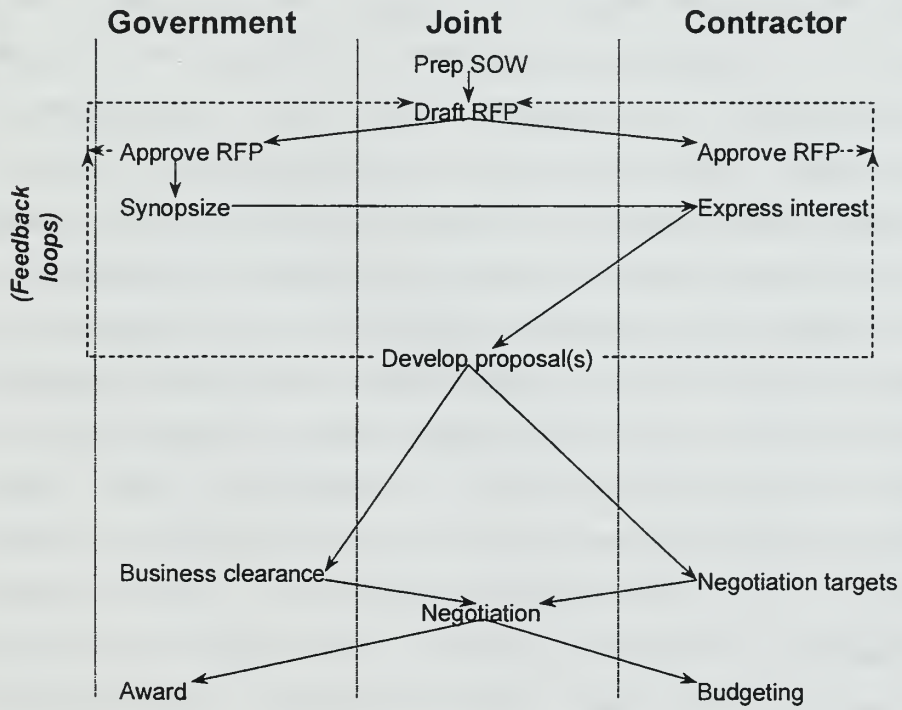

Figure 2. Alpha Contracting Process Flow [Ref. 40]

The alpha contracting process begins with an initial meeting scheduled with all IPT members to jointly prepare the SOW, specifications, Contract Data Requirements List (CDRL) and draft RFP. Once the draft SOW and RFP are

produced, the program office approves or seeks approval of the RFP via appropriate DoD channels [Ref. 11]. Concurrently the contractor executives review and provide feedback to the contractor team members [Ref. 34].

At the next set of meetings, the IPT jointly develops the proposal. Proposal information goes back with team members to Government and contractor offices. The Government personnel in the IPT are granted a pre-negotiation business clearance memorandum while the contractor personnel in the IPT are given feedback for negotiation targets from senior executives [Ref. 39]. The goal here is for both parties to be thoroughly familiar with all contract requirements, noting the build-up of costs, and to have the ability to voice any concerns early in the process [Ref. 11]. If these early concerns are handled with full trust and honesty, the alpha contracting process should significantly streamline the proposal and award processes. The IPT environment eliminates costly and time consuming delays associated with the traditional "over the fence" approach.

The third set of meetings constitutes the actual contract negotiation process. The same IPT that has developed the RFP and proposal now negotiates any remaining differences into the final contract. The outcome of negotiations is contract award. This process is highly streamlined with the key vehicle being a joint effort to produce the contract. Knowledgeable individuals work together on problem solving and answers instead of transferring memos and formal documents from one office to another.

1. Implementing the Alpha Contracting Process

Figure 2 also illustrates that most of the document forming work is under the "joint" category depicted in the center column. The IPT will not proceed to the next phase of contracting until the team members agree on the final document for that phase. The team, and the documents they produce, builds upon each other.

Management commitment is needed to make the alpha contracting process truly work. A paradigm shift from traditional sole-source procurement must take place in both organizations. Both the Government and contractor must think of teamwork and joint development instead of "arms length contracting" and formal documentation.

Another part of the paradigm shift is a breakdown in the traditional negotiation process. No longer are we "coming to the table" with an "I win, you lose" negotiation tactic as was thought by some as the standard in the past. The negotiation tactic taken in alpha contracting is even more amicable than the collaborative negotiation relationship discussed in Dobler and Burt [Ref. 16], where teams focus on "basic interests, mutual satisfying options, and fair standards". Rather, alpha contracting negotiations occur continuously through the IPT process.

According to Dobler and Burt, "probably 90 percent or more of the time involved in a successful negotiation is invested in preparing for the actual face to face discussions" [Ref. 16]. Conceptually, this time previously spent in preparation can be completed jointly. This can increase understanding and trust among team members and ultimately reduce Procurement Administration Lead Time (PALT). The philosophy of negotiations in the alpha process

is no longer adversarial but rather one of cooperation. If information is shared instead of kept secret in negotiations, the probability of producing a higher quality end user product is high.

For such negotiations to be successful in alpha contracting, however, trust must exist between both parties [Ref. 32]. Each organization needs to be honest about the goals they present and their true desire of contract end state. They must be willing to communicate their goals and interests to the other partner in the alpha contracting process in order to attain their goals.

The most important factor for successful alpha contracting appears to be the need for the process itself to be championed by upper management within Government and industry. Upper management needs to look at the process as a different way to conduct business. Additionally, upper management needs to assign the right decision-makers with the right personalities to the team for both parties. If the Government and the contractor do not empower their team members to make important decisions, this process could foster greater mistrust among the parties and even prolong the contracting process.

2. Alpha Contracting Benefits

There are multiple benefits attainable by using the alpha contracting approach to innovate the contracting process. The most obvious benefit is reducing cycle time (e.g., PALT). Multiple examples of contract timesaving have been seen in both the Army and Navy. The Army's Tank-Automotive Command (TACOM) reduced cycle times for an Improved Recovery Vehicle (IRV) purchase from twenty-two to four months with alpha contracting. TACOM has also reduced

contracts usually taking five to seven months to under one month for their Responsive Urgent Services Handling project [Ref. 36].

The time saving aspect of alpha contracting can also be viewed as a risk management technique. Less time spent from original SOW to contractor proposal equates to less change in material and labor costs to the contractor. Fewer changes in costs mean less variance in pricing and less cost risk to the contractor. Fewer days in the negotiation cycle also equates to less change in technology. According to Kerzner, changes in technology over time are some of the greatest risks in today's projects [Ref. 29].

In addition to timesaving, alpha contracting may reduce conflict between the Government and contractor through understanding each other's needs and desired goals. Fewer surprises are involved since the IPT develops the SOW and RFP jointly. In the end, "the Government and contractor have consistent expectations and have an achievable, executable program requiring fewer post award modifications" [Ref. 34].

Another benefit to the alpha process is that it effects many of the reform initiatives mandated by Defense Acquisition Workforce Improvement Act (DAWIA). Teaming with industry is the most obvious initiative utilized. Reducing cycle time by tailoring the old acquisition process also enforces the reform initiative. By involving the user throughout this process, the focus remains on the customer, which in turn supports the initiative of managing contracts for end results. The alpha contracting process truly is a model for acquisition reform.

3. Alpha Contracting Disadvantages

There are also some disadvantages to the alpha process. First, a halfhearted commitment by either organization can induce failure. In some Government or industrial offices, resistance to process change may be evident. Whenever a complete change in thought process is involved, some individuals and organizations will choose to resist the change.

Second, the process, though shorter, is labor and schedule intensive early in the acquisition process. Since the process focus is on IPTs, the team itself can be a disadvantage. If team members are not trained, empowered to make decisions or unavailable for scheduled meetings there can be a breakdown in the process [Ref. 32].

Third, without trust between both parties and especially between IPT members, alpha contracting will not be successful. Lt Col Tom DeMars, from the program office of the Predator Unmanned Aerial Vehicles (UAV), states:

> This improvement [Alpha Acquisition Process] has been implemented in all major acquisitions for the Predator MAE UAV program…. This process will not work when there is an adversarial relationship between Government and contractor. [Ref. 15]

4. Summary

Alpha contracting provides a streamlined contracting process born out of acquisition reform. This process maintains a proven track record in the sole-source acquisition arena. Benefits from alpha contracting include reduced PALT and improved Government and industry relations.

The success in streamlining this process has been determined by a focus on joint development of contracting documents and sharing and digesting information as one joint Integrated Product Team. This success comes at a cost, however. Early commitments of manpower, training of personnel and team member empowerment are necessary elements of the acquisition strategy for success of alpha contracting techniques.

Contracting for the acquisition of goods or services, including an alpha acquisition, constitutes a business process, which is ripe for innovation. Like any other business process, a sound innovation methodology must be employed for analysis. Process innovation demonstrates one methodology for analysis of alpha contracting or any other business process.

D. PROCESS INNOVATION

Many process improvement initiatives can be found in the business literature today, each with its own framework and methodology for change. Examples of these initiatives include business process reengineering, process innovation, business process redesign, and business process improvement. According to Bitzner [Ref. 4], these initiatives "…share a common goal: the desire for dramatic improvements in business productivity and customer service". While there are many initiatives available, the framework and methodology used in this thesis for process analysis is Davenport's model of Process Innovation [Ref. 12].

Davenport's model is selected as a framework due to its process focus for order-of-magnitude improvement. Application of alpha contracting techniques to the service contracting process implies much more than simple process

improvement but rather, innovation or dramatic improvement to the process. This point will be made clear in the comparison and contrast of process innovation versus improvement.

1. Innovation Versus Improvement

Webster's New World Dictionary defines a process as a "series of actions or operations directed toward a particular result." Webster's further defines innovation as "the introduction of something new" or "a new idea, method or devise." Davenport describes process innovation as combining:

> …a structure for doing work with an orientation to visible and dramatic results … stepping back from a process to inquire into its overall business objective, and then effecting creative and radical change to realize order-of-magnitude improvements in the way that objective is accomplished. [Ref. 12]

The key is analysis of the entire process and if necessary implementing a radical change to greatly improve the process. Innovative practices are advocated in the DoD 5000.1 which encourages program managers to "continually search for innovative practices that reduce cycle time, reduce cost, and encourage teamwork" [Ref. 52].

The goal of process innovation, therefore, is to focus on a key business process in order to achieve "major reductions in process cost or time, or major improvements in quality, flexibility, service levels, or other business objectives." [Ref. 12] This mind set is much different than process improvement. Process improvement takes the approach of tweaking the existing process while process innovation analyzes the best means of accomplishing the

desired outcome of the process. Davenport explains the difference between improvement and innovation:

> If process innovation means performing work activity in a radically new way, process improvement involves performing the same business process with slightly increased efficiency or effectiveness. [Ref 12]

Clear examples of the difference between process innovation and process improvement can be seen in Figure 3.

	Improvement	Innovation
Level of Change	Incremental	Radical
Starting Point	Existing Process	Clean Slate
Frequency of Change	Continuous	One-Time
Time Required	Short	Long
Participation	Bottom-Up	Top-Down
Typical Scope	Narrow, Within Function	Broad, Cross Function
Risk	Moderate	High
Primary Enabler	Statistical Control	Information Tech
Type of Change	Cultural	Cultural/Structural

Figure 3. Process Improvement verses Process Innovation [Ref. 12]

2. Davenport's Methodology

Davenport's methodology for process innovation is described through a five-step process: 1) Identify Process for Innovation, 2) Identify Change Levers, 3) Develop Process Visions, 4) Understand Existing Processes, and 5)

Design and Prototype the New Process [Ref. 12]. Each phase is discussed in turn.

Figure 4 presents a summary of Davenport's High Level Approach to Process Innovation. Notice each high-level step includes a sequence of more detailed activities. This analytical structure and step by step methodology represent strengths of the process innovation approach. This thesis has its focus on the steps in Phases IV and V of the framework, as acquisition reform and alpha contracting provide much of the process vision acquired from Phase III.

PHASE I: IDENTIFY PROCESS FOR INNOVATION

Step 1: Enumerate Major Processes

Step 2: Determine Process Boundaries

Step 3: Assess Strategic Relevance of Each Process

Step 4: Render High-Level Judgements of the "Health" of Each Process

Step 5: Qualify the Culture and Politics of Each Process

PHASE II: IDENTIFY CHANGE LEVERS

Step 1: Identify Potential Technological and Human Opportunities for Process Change

Step 2: Identify Potentially Constraining Technological and Human Factors

Step 3: Research Opportunities in Terms of Application to Specific Processes

Step 4: Determine Which Constraints will be Accepted

Figure 4. Davenport's High Level Approach to Process Innovation [Ref. 12]

PHASE III: DEVELOP PROCESS VISIONS

Step 1: Assess Existing Business Strategy for Process Directions

Step 2: Consult with Process Customers for Performance Objectives

Step 3: Benchmark for Process Performance Targets and Examples of Innovation

Step 4: Formulate Process Performance Objectives

Step 5: Develop Specific Process Attributes

PHASE IV: UNDERSTAND EXISTING PROCESSES

Step 1: Describe the Current Process Flow

Step 2: Measure the Process in Terms of the New Process Objectives

Step 3: Assess the Process in Terms of New Process Attributes

Step 4: Identify Problems with or Shortcomings of the Process

Step 5: Identify Short-Term Improvements in the Process

Step 6: Assess Current Information Technology and Organization

Figure 4 (Continued)

PHASE V: DESIGN AND PROTOTYPE THE NEW PROCESS

Step 1: Brainstorm Design Alternatives

Step 2: Assess Feasibility, Risk, and Benefit of Design Alternatives and Select the Preferred Process Design

Step 3: Prototype the New Process Design

Step 4: Develop a Migration Strategy

Step 5: Implement New Organizational Structures and Systems

Figure 4 (Continued)

a. Phase I: Identify Processes for Innovation

Before innovation of a process can begin, an organization must first understand the processes already in place, the purpose of these processes and the health of the current processes. A healthy process translates into a process with well-defined process boundaries, jobs and ownership of the entire process [Ref. 12]. An inefficacious process, on the other hand, "crosses many functions and involves many narrowly defined jobs or has no clear owner or customer" [Ref. 12].

After understanding the processes in place, an organization decides which processes are right for innovation and how best to prioritize its innovation efforts. Davenport describes:

> The primary goal of process qualification is to gauge the culture and political climate of a target process…(and)…to select only processes that have a committed sponsor and exhibit a pressing business need for improvement [Ref. 12].

Prioritization is based on the merits of strategic relevance, process health and level of sponsorship. The highest organizational priority for innovation is an unhealthy or currently problematic process, politically sponsored and tied to the organization's long-term strategy. The processes with lower priorities will be innovated when organization resources allow. [Ref. 4]

b. Phase II: Identify Change Levers

Enablers such as information technology, organizational design and human resources must be identified as catalysts for process innovation. In phase two, an organization identifies possible enablers by taking into consideration "both what is possible and the constraints imposed by current technology and (the) organization" [Ref. 12]. The change enablers must be analyzed by the organization to ensure full advantage is taken of them. They must ensure they have the capability to use the enablers (i.e., physically within the organization) or the assets in place to obtain them. Once the human or technological enablers are identified as available for use, the organization will research how each enabler may best benefit or hinder the process. Finally, the organization will determine if the constraints involved with using various enablers are acceptable.

c. Phase III: Develop Process Vision

In phase three the organization gains a visionary understanding of what the process should ultimately accomplish for the organization. It is important for the organization to include the existing organizational strategy as a basis for the innovation efforts. Davenport explains that process innovation is:

> Impossible--or at least only accidental--unless the lens of process analysis is focused on a particular strategic part of the business, with particular strategic objectives in mind [Ref. 12].

The customers for whom the process is directed should also be queried for correct vision direction and to understand their viewpoint on the process. The organization should also benchmark and research other organizations that may have similar processes for examples of innovation.

After understanding organizational strategy and process direction, the organization's process objectives are identified.

> Process objectives include the overall process goal, specific type of improvement desired, and numeric target for the innovation, as well as the time frame in which the objectives are to be accomplished [Ref. 12].

This allows a framework in which the organizational innovators operate. Specific attributes of the process under scrutiny are then refined to depict how these objectives will be accomplished.

d. Phase IV: Understanding Existing Processes

During phase four, the existing process flow is documented. This phase is key since the existing process will become the baseline for innovation. If the organization lacks understanding and poorly documents its baseline process, the reengineering effort will not have a stable platform from which to prototype the new process. Davenport describes four reasons, in particular, to document the existing process prior to proceeding with innovation [Ref. 12]:

1. Understanding existing process facilitates communication among participants in the innovation initiative.

2. In most complex organizations there is no way to migrate to a new process without understanding the current one.

3. Recognizing problems in an existing process can help ensure that they are not repeated in the new process.

4. An understanding of the current process provides a measure of the value of the proposed innovation.

The process flow is documented in terms of the new process objectives and attributes developed in phase three. Common methods of documenting a business process include process diagrams, such as flow charts, or cost build up charts. Flow-charting exhibits a simple means of communicating the process flow to portray a clear understanding by all lines and levels of management. Cost build up charts, on the other hand, may better disclose process bottlenecks and areas of slowing cycle time. [Ref. 12]

Shortcomings of the existing process are identified when documented as well as short-term process improvements available to address the inefficiencies. "The analysis of the present process includes an evaluation of the process' supporting information infrastructure and organizational knowledge, skills and employee base" [Ref. 4].

e. Phase V: Design and Prototype the New Process

In the final phase, the group responsible for process change analyzes information gathered in the first

four phases, generates ideas for the new process and actually designs new process concepts. The new designs must be compared and contrasted for opportunities, constraints and best fit into the organization strategy. Assessment of design alternatives should include organizational benefit, risk and feasibility. The assessment of process design alternatives are "compared in terms of structure, technology, and organization to fully understand the implications of each alternative" [Ref. 12]. After a comprehensive assessment, the new process design is prototyped and a migration strategy from current to innovative process is developed. Finally, the newly innovative process is implemented into the organizational structure and systems.

E. SUMMARY

The DoD spends billions of dollars a year acquiring goods, services, personnel and construction. The traditional contracting process used by the DoD to acquire these items from a sole-source is expensive in the sense of both time and money. Barriers such as an "over the fence" documentation procession and secrecy in Government against industry information increase the overall acquisition cycle time.

Alpha contracting portrays a radically different process approach to acquiring a product. Not only does the process flow chart dramatically differ from the traditional method but also the leaders involved in the process take a completely different leadership approach to make this process successful. For example, the idea of maintaining secrecy of a position in the traditional process changes to one of shared information in the alpha process. The shared

information digested in a joint IPT lead to reduced time in producing contract documents and an increase the Government and industry partnership relations. Alpha contracting, though a relatively new concept, maintains a proven track record of benefits in the sole-source environment.

All DoD acquisition activities constitute a business process. Process innovation implies a radical change in such a process for the better. One method of business process innovation is Davenport's High Level Approach to Process Innovation. Davenport's model as a framework and methodology is of particular interest to this thesis. His model focuses, step by step, on the current process in place, what that process attempts to produce and how using this information will create a better process prototype. These model aspects provide a solid baseline for analysis of applying alpha contracting techniques to innovate the service contracting process.

This thesis next focuses on contracting for services, especially exploring any unique aspects of that process. Comparative process analysis is used to document the current service contracting process in an attempt to better understand possible approaches to innovate the service contracting process.

III. DEPARTMENT OF DEFENSE SERVICE CONTRACTING PROCESS

A. METHODOLOGY

This chapter presents the methodology used to analyze and redesign the DoD process of contracting for services along with presenting the associated research data. Data for this thesis were collected in three phases. The first phase consists of a review of literature and Government publications to gather background on the DoD process of acquisition of services by contract. A specific area of review includes the unique aspects of acquiring services by contract vice contracting for supplies or hardware.

The second phase of data collection included determining the right mix of contracting personnel to interview. Careful consideration was given in order to obtain opinions from a spectrum of sources with service contracting experience. Determination includes DoD service branch, contracting organization type and dollar amount of contracts.

The third and last phase of data collection consisted of the interviews themselves. A semi-structured interview approach was taken with a minimum number of standard interview questions. The researcher explained to the interviewees that questions are only a bridge to spark conversation in the research area. Interviews were conducted with contracting personnel with experience in contracting for services from the Marine Corps, Navy, Army and Air Force. Service contracting experience includes base and system commands. The contracting personnel have service contracting experience ranging from the Simplified

Acquisition Threshold (SAT) to multi-million dollar contracts. The majority of interviews were in person with some also conducted over the phone.

The presentation of data in this chapter takes the form of process descriptions captured through field visits and interviews as described above. Eight separate service contracting processes are described in this manner. Together these eight processes constitute the "baseline" used for analysis and redesign. To compare service contracting processes from various commands at a summary level, a metric is created for pattern analysis. This metric is referred to as the comparative process "jointness ratio". The jointness ratio is calculated by dividing the number of joint (i.e., Government-contractor together) contracting steps by the total number of process steps. For example, a contracting process in which 4 of 10 steps are performed jointly would have a jointness ratio of 0.4. Assumptions for the determining the jointness ratio follow:

1. A "joint" step is conducted together with appropriate personnel from both the Government and the contractor teams. In Figures 1 and 2 of Chapter II these steps are depicted under the joint column of the process flow.

2. A contracting process "step" occurs either by a new document being produced or approved (jointly or separately) or when a communication is sent "over the fence".

3. The contracting process begins at preparation of statement of work (procurement work statement).

4. The contracting process ends at contract award.

For example, the traditional sole-source model in Figure 1 of Chapter II would begin at the statement of

work, end at contract award and have a total of fourteen contract process steps. The traditional sole-source process has a total of two joint steps, factfinding and negotiations. This creates a "joint" ratio of 2/14 or 0.143. Using the alpha contracting process from Figure 2 as another example, we find a total of nine steps from statement of work to award. However, there are four joint steps, including preparation of the statement of work, draft RFP, develop proposals and negotiations. A "joint ratio of 4/9 or 0.444 results. This joint ratio will be used in the chapter as a measure for comparative process analysis.

B. UNIQUENESS OF THE DEPARTMENT OF DEFENSE SERVICE CONTRACTING PROCESS

The Office of Federal Procurement Policy (OFPP) defines services in Policy Letter 91-2 as "the performance of identifiable tasks rather than the delivery of an end item of supply" [Ref. 42]. DoD acquires a significant amount of services each year by contract. Services may range from the routine maintenance of facilities or equipment at a base command to highly sophisticated technical and management assistance for the design, development or production of a major weapon system at a systems command. [Ref. 42]

There are differences found in the process of contracting for services compared to other contracting areas such as supply. Both literary research and conversations with interviewees serve to illuminate the unique aspects in the DoD service contracting process discussed in this chapter. The unique aspects are describing the statement of work, labor intensity, evaluation criteria,

measuring quality and the service product being represented by people, not an end item of material supply. Each unique aspect of contracting for services is discussed in turn.

1. Describing the Statement of Work

A difficulty inherent in contracting for services is properly describing the statement of work so that users acquire what they need and contractors fully understand the correct requirements [Refs. 1, 3, 5, 7, 9, 14, 18, 24, 27, 30, 38, 41, 45, and 48]. Chuck Nobes, Head of Contracts at the Marine Corps Logistics base in Albany Georgia, states that "the user activities usually have quite a problem explaining exactly what they want when contracting for services" [Ref. 41]. Contracting for services is not as simple as stating a detailed specification or stating the requirement as the same quality as model X. This problem compounds as contracting personnel begin writing the SOW and deciphering what the user actually needs.

In a simplified example, a SOW for a maintenance contract may include cleaning a room and, though assumed, may not specifically state that the garbage must be removed from the room to the dumpster outside. This can lead to confusion in SOW requirements and further difficulty in determining anticipated costs. Of course a properly written SOW will end the trash dumpster problem. However, as user requirements become more complicated, the observer should understand how such a problem might compound. A service contract SOW has the unique need to include all of the needed services, but at the same time not be so restrictive as to provide an advantage to one specific contractor. [Ref. 5]

2. More Labor Intensive for the Contracting Entity

Preparing a contract when acquiring services can be "at least fifty percent more labor intensive for a contracting specialist than when preparing a supply type contract" [Ref. 41]. It can be a more complicated process. The contracting specialist must have an understanding of commercial labor rates and Department of Labor (DOL) rate requirements [Ref. 1]. This understanding, combined with the difficulty of estimating both the amount of labor hours and level of labor skill, requires an experienced contracting specialist to effectively contract for services.

3. Evaluation Criteria

Since a proposal for services does not necessarily describe a tangible end item, the source selection process and evaluation criteria are often harder to determine and depict than with a supply contract [Ref. 18]. For instance, evaluating level of skill can be quite subjective. It is an involved process to compare and contrast proposal differences in the face of evaluation criteria, in both amount of hours and level of skill, to determine the proposal that will provide the best value for the Government [Ref. 41].

4. Determining or Measuring Quality

When contracting for services there is a focus on the quality of support to meet the service performance expectations [Ref. 10]. The difficulty arises when working to specify by contract an acceptable level of quality of the inspection process or of the deliverable itself. When contracting for supplies, a desk for example, the user can state a requirement for 100 oak desks of quality exceeding Hills Brothers model 200C. Quality in this sense can be

interpreted as the type of wood, glue or other supplies used to produce the desk. According to CDR Qua, Head of Contracts at Fleet Industrial Supply Center, San Diego:

> A service contract, on the other hand, say air traffic control range services, available within 24 hours, are difficult to determine quality of the deliverable…. Safety is a huge issue in this contract…. You can pay for the hours of air traffic control but it is more difficult to incentivize and determine the quality of the safety provided by the contractor. [Ref. 45]

Another example of the difficulty in determining quality in a service contract is with childcare. In a childcare contract, the Government may incentivize a contractor to comply with Federal regulations such as room size per number of children or supervisor per child ratios. The actual quality of childcare provided, however, is very difficult to objectively measure. [Ref. 45]

5. Product is the People Not the End Item

Unlike physical supplies, the deliverable of a service contract is intangible. Service contracts are based on the reputation of the personnel in the company who are delivering the service. In the service industry, if contractor personnel change, most likely, so will the level of service. Many tangible end items, on the other hand, can still be produced to specification even when key personnel leave a company. [Ref. 27:p. 48]

6. Role of the Contracting Officer Representative or Quality Assurance Inspector

When inspecting a service contract, a comparison of product output to a specification or number received can not be conducted as with a supply contract. This uniqueness in service contracts also ties into the quality

issue stated above. A Contracting Officer's Representative (COR) must decide whether the contractors provide the services specified within the terms of the contract at a level of quality acceptable to the user. [Refs. 5 and 10]

A service contract is a "moving document and difficult for the COR to stay on top of developing matters to ensure compliance to the contract." [Ref. 3] "This is unlike a supply contract where a COR or inspector only determines if the correct item is received." [Ref. 5] The COR responsible for a service contract must understand the quality of services agreed to by both Government and contractor at the time of the initial meeting of the minds at contract agreement.

7. Interface with the Warfighter

Within the DoD, a warfighter or commander has the ability to order a change and have it take place on the spot. A peculiarity when contracting for services is that the "[contracting personnel] need to educate the warfighter on contract administrative issues of what can and can not be changed with the services taking place." [Ref. 25] Situations like this may open the door for unnecessary equitable adjustment or even contract scope disagreements. Base maintenance type service contracts provide good examples of how this situation takes place. A base commander may observe a contractor cutting the grass and desire the grass to be cut in another fashion, but he may not realize the contractor's method fits the contract guidelines [Ref. 25].

C. COMPARATIVE PROCESS ANALYSIS

In this section, a number of service contracting processes are documented for comparative process analysis.

Each of the eight DoD command's service contracting processes is presented and discussed in order of ascending jointness ratio. The eight commands are depicted in Table 1.

- Space and Naval Warfare Systems Command
- Marine Corps Recruit Depot, San Diego
- Camp Pendleton
- Marine Corps Logistics Base, Albany
- Marine Corps Recruit Depot, Parris Island
- Fleet and Industrial Supply Center San Diego
- National Training Center, Fort Irwin
- Eglin Air Force Base, Special Programs

Table 1. Command Service Contracting Processes

Each of the following processes, with the exception of Eglin Air Force Base, involve similar Government and industry contracting personnel as discussed in the traditional sole-source process from Chapter II. These service contracting processes also utilize the same "over the fence" method of document transfer in order to communicate between Government and industrial organizations.

1. Space and Naval Warfare Systems Command

The Space and Naval Warfare Systems Command (SPAWAR) process for service contracting scores 2/16 or 0.125 on the jointness ratio. SPAWAR's service contracting process is essentially a textbook example from FAR part 15. The bulk of services SPAWAR acquires are for technical expertise and other program support of the command's program systems. The process is pictured in Figure 5.

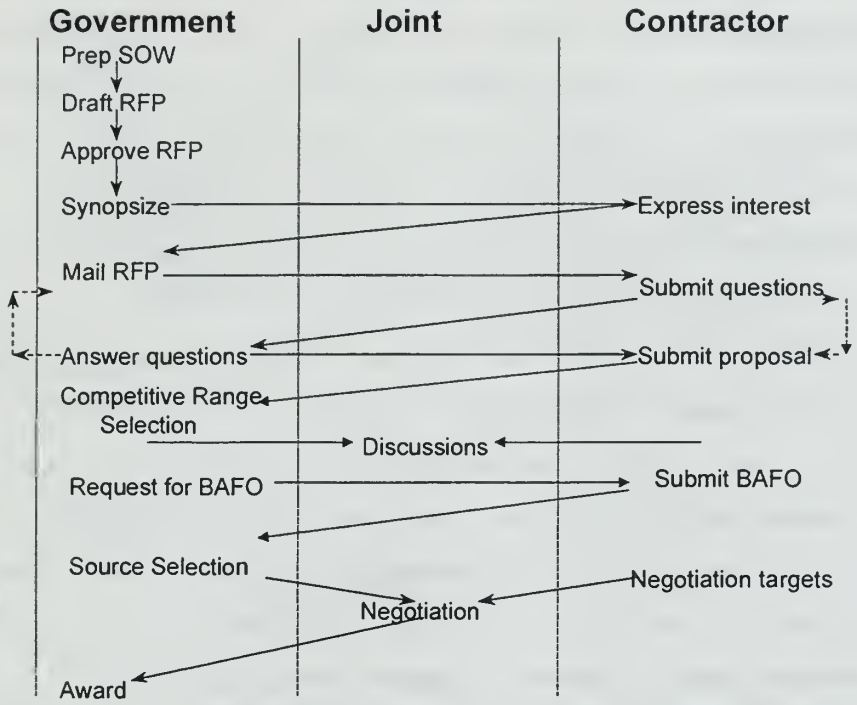

Figure 5. SPAWAR Service Contracting Process Flow [Refs. 14, 27, and 54]

Notice how closely this process design conforms to that used to depict the traditional sole-source contracting process in Chapter II. The obvious exception from the sole-source model is that multiple RFPs are sent out and multiple proposals are received by the Government from interested contractors.

As can be seen in Figure 5, SPAWAR evaluates all proposals to establish a competitive range. The competitive range is based on the ratings of each proposal against all evaluation criteria. The contracting officer establishes the competitive range comprised of all of the most highly rated proposals [Refs. 19 and 27].

At this point in the process, the contracting officer conducts discussions with contractors to clarify any questions on their proposals. Every effort is made to ensure

information shared from the Government with one contractor is also expressed to all other offerors. At the conclusion of these discussions, each offeror still in the competitive range is requested to submit a best and final offer (BAFO). FAR part 15 no longer requires use of a BAFO [Ref. 19]. However, SPAWAR and other commands in this chapter continue use of the BAFO technique [Refs. 14, 27, and 54].

Once BAFOs are received, the SPAWAR team evaluates final proposals and completes source selection. Final negotiations take place between the Government and the selected contractor. Notice that as with the traditional sole-source process, this is only the second joint meeting conducted prior to definitizing the contract.

2. Marine Corps Recruit Depot, San Diego

The Marine Corps Recruit Depot (MCRD) San Diego scores a 2/14 or 0.143 jointness ratio. The extent of services acquired by contract range from under the Simplified Acquisition Threshold (SAT) to laundry, facilities maintenance and tailoring contracts at about $1 million a year. The MCRD San Diego service contracting process is pictured in Figure 6.

Base service support type contracts at MCRD San Diego necessitate a joint Government and offeror site visit. The site visit gives each potential contractor a chance to see the facilities where the services will be performed. For example, a contractor would visit the dining hall where cafeteria services are contemplated prior to submitting a proposal.

After the site visit, the process next allows for a question and answer period prior to proposal submission. Many iterations of questions and answers may take place as

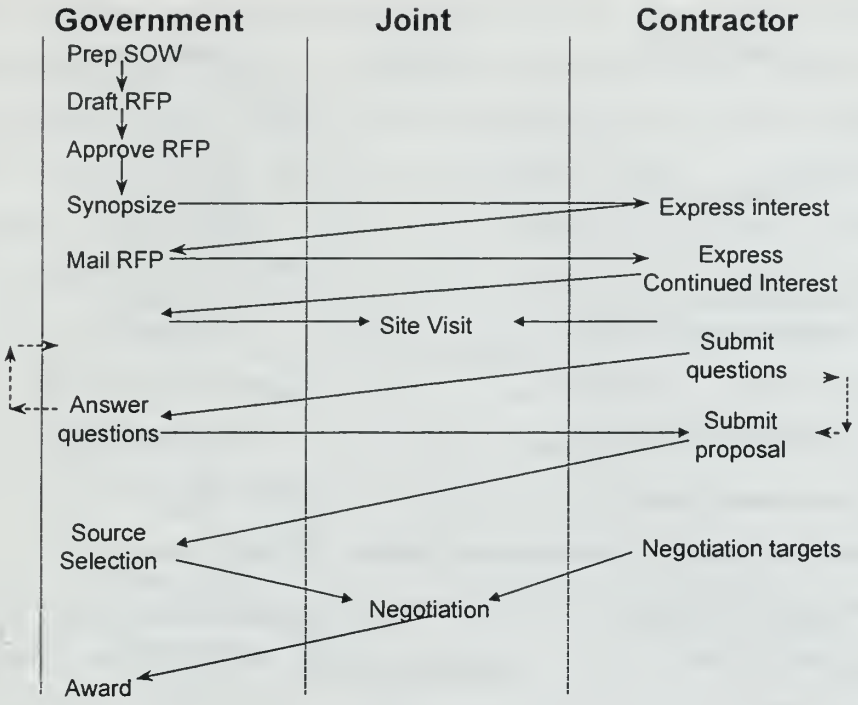

Figure 6. MCRD San Diego and Camp Pendleton Service Contracting Process Flow [Refs. 14, 27, and 54]

noted by the dotted lines and arrows in Figure 6. Proposals are then submitted and a contractor source is selected. Notice there is no competitive range selection or step for BAFO requests. Major Neuberger, Director of Purchasing and Contracting at MCRD San Diego, states:

> With a lot of competition and much of our acquisitions under the SAT we have no need to request a BAFO…. Additionally, we state in the RFP that we reserve the right to award based off of the contractor's initial proposal. [Ref. 38]

Finally, negotiations take place and the definitized contract is awarded.

3. Camp Pendleton California

Camp Pendelton also scores a 2/14 or 0.143 jointness ratio. The major service contracting needs include a chow hall contract of about $7.5 million a year, engine repair

at $2.5 million, and a laundry contract at about $1.8 million a year. Contracting Officers utilize basically the same service contracting process as their counterparts at MCRD San Diego. Camp Pendleton holds discussions with contractors, however, only in the case of complex requirements [Ref. 3]. An interesting point noted during interviews with Mr. Jack Key, Deputy of Purchasing and Contracting Camp Pendleton, is "complexity of the requirement, not the monetary value of the contract, will determine the need for discussions." [Ref. 30]

4. Marine Corps Logistics Base, Albany Georgia

The Marine Corps Logistics Base (MCLB) in Albany Georgia supports the entire Marine Corps with upper-echelon logistics service contracts. The service contracting process, described in Figure 7, most recently has been used for a Marine Corps Chemical Biological Incident Reaction Force (CBIRF) services acquisition. MCLB scores a total of 3/18 or 0.167 jointness ratio.

The MCLB process is much different than any of the processes discussed above. The process begins with a Request for Concept Papers (RCP). A RCP simply requests industry contractors to explain their theories on how they can accomplish the Government need. It can be thought of as an advanced way of conducting market research. The RCP is sent out as a Broad Agency Announcement (BAA).

Once concept papers are received, MCLB contracting personnel downselect to five potential offerors. They further request the five selected offerors to give an oral presentation on the concept execution plan. This execution plan provides the details of how the service requirements will be addressed.

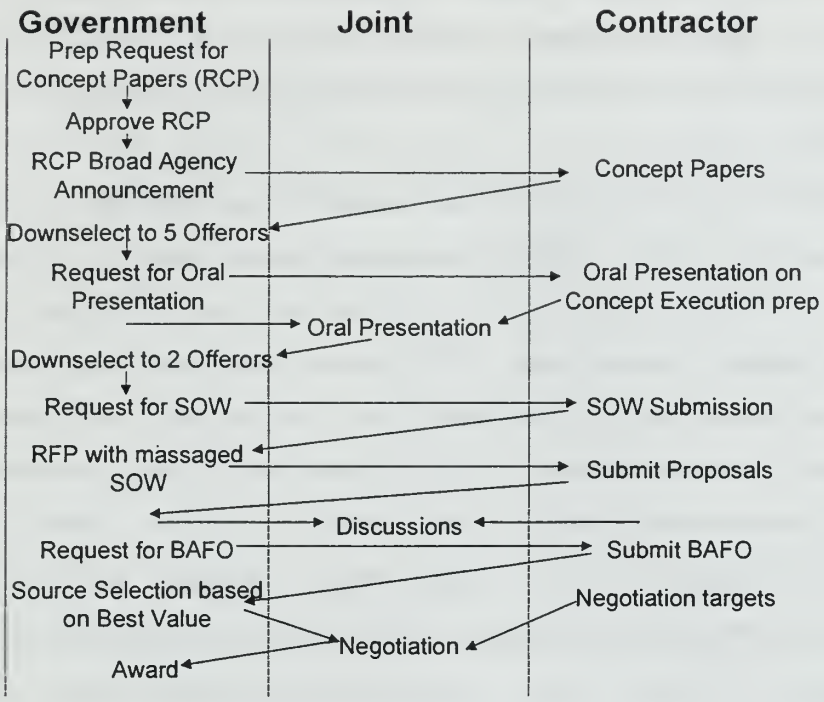

Figure 7. MCLB Albany Service Contracting Process Flow [Refs. 6, 41, and 44]

After conclusion of oral presentations, the offerors are again downselected to a group of two contractors. A request is sent to these two contractors to submit a written SOW. MCLB Albany utilizes the two submitted SOWs "to fine tune a RFP that brings both contractors on a level playing field" [Ref. 44]. Contractors then submit proposals and discussions are held for any clarifications before a BAFO is requested. Final source selection ensues, negotiations are held and the contract is awarded.

5. Marine Corps Recruit Depot, Parris Island

The contracting office at Marine Corps Recruit Depot (MCRD), Parris Island supports local base operations as well as the Eastern Region Recruiting District. Currently the largest service contracts include multi-year uniform

alteration work and other maintenance support type contracts. The jointness ratio score is 3/16 or 0.188. The MCRD Parris Island service contracting process is shown in Figure 8.

The MCRD Parris Island service contracting process is very similar to the SPAWAR process depicted in Figure 5. But notice Parris Island also conducts site visits like the process of MCRD San Diego. Further, unlike the technical resource contracting of SPAWAR, Parris Island's focus is on base support where potential contractors can submit more accurate proposals after walking through the service support facilities. Like MCRD San Diego, Parris Island states in the RFP the right to select a source based on the first proposal submitted, possibly bypassing the need for both discussions and request for BAFO.

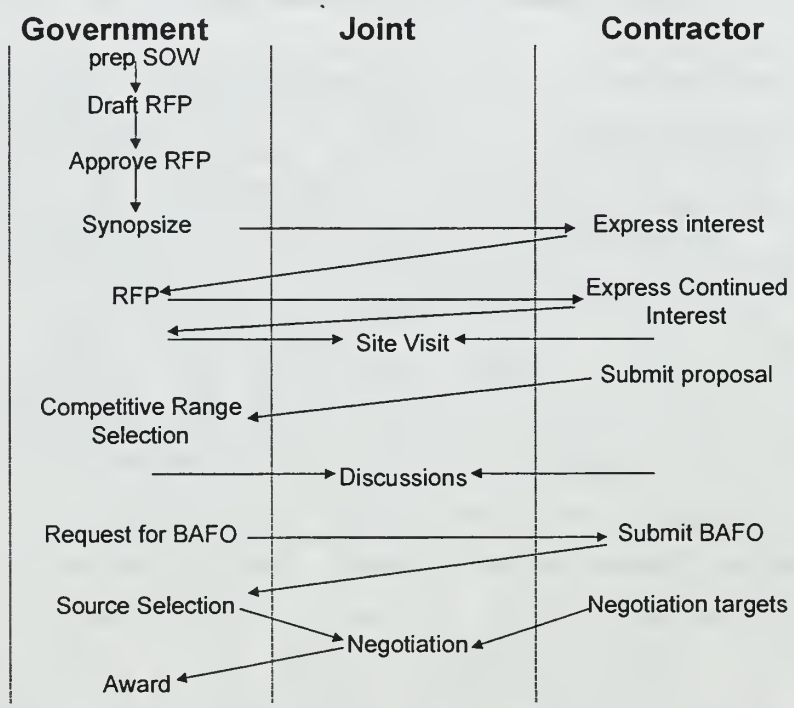

Figure 8. MCRD Parris Island Service Contracting Process Flow [Ref. 5]

6. Fleet and Industrial Supply Center, San Diego

The Fleet and Industrial Supply Center (FISC), San Diego acquisition of services includes hardware and software technical design expertise, a multi-year $160 million aircraft maintenance contract and a $48 million ship repair contract. The process scores a 3/15 or 0.2 jointness ratio and is presented in Figure 9.

As noted in Figure 9, FISC San Diego devotes time up front in the process to develop and approve a combined synopsis and solicitation. This is done to decrease cycle time. Notice this process omits the steps for requesting and receiving the RFP, and site visits are not normally conducted due to the service support focus on aircraft and ship maintenance [Ref. 18].

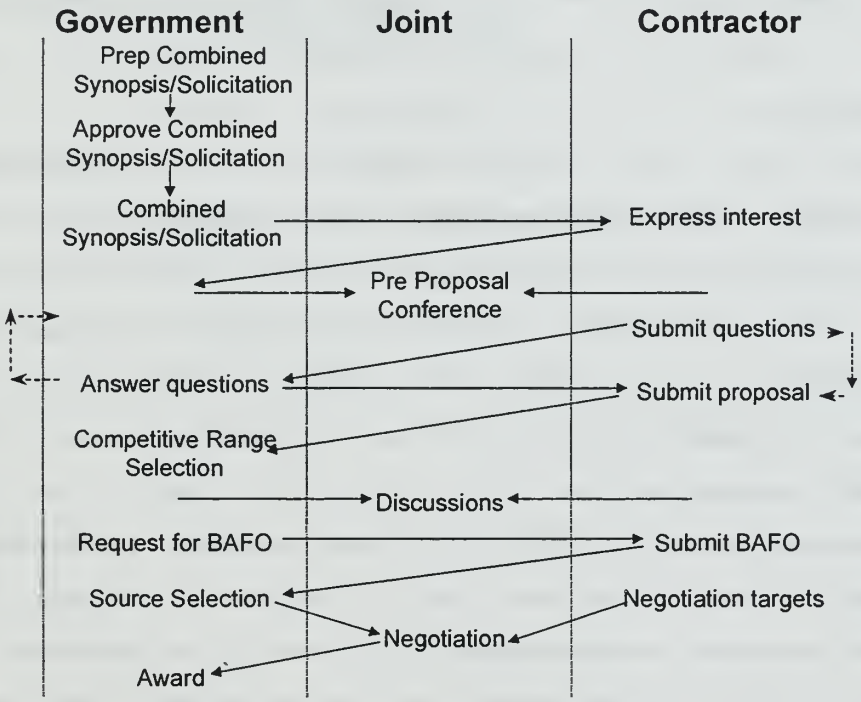

Figure 9. FISC San Diego Service Contracting Process Flow [Refs. 18 and 45]

However, a pre-proposal conference is conducted to clarify, in an open forum, any questions from potential contractors, and written questions and answers are allowed after the pre-proposal conference is complete. The competitive range selection, discussions, BAFO, source selection, negotiation and award steps are the same as discussed in processes above.

7. National Training Center, Fort Irwin

The National Training Center (NTC), Fort Irwin contracting personnel procure and maintain many services for the base. Two of the largest contracts include a multiple year $1 billion logistics support contract and a $26 million installation support contract. Both of these major contracts were awarded under a cost-plus-award fee structure. The NTC Fort Irwin service contracting process, described in Figure 10, scores a total of 4/19 or 0.211 jointness ratio.

The NTC Fort Irwin process begins with a Procurement Work Statement, which is equivalent to the Navy SOW. The RFP and synopsis steps are familiar to the above discussed processes. Due to the complicated nature of service support required with some NTC RFPs, contractors are allowed two separate site visits. One site visit takes place after synopsis in the CBD and one after the contractor receipt of the RFP. Although these site visits increase PALT, such investment pays dividends in improving potential contractor understanding of user requirements.

NTC Fort Irwin also makes use of a competitive range determination step. They hold discussions and request a BAFO prior to source selection. Negotiations take place

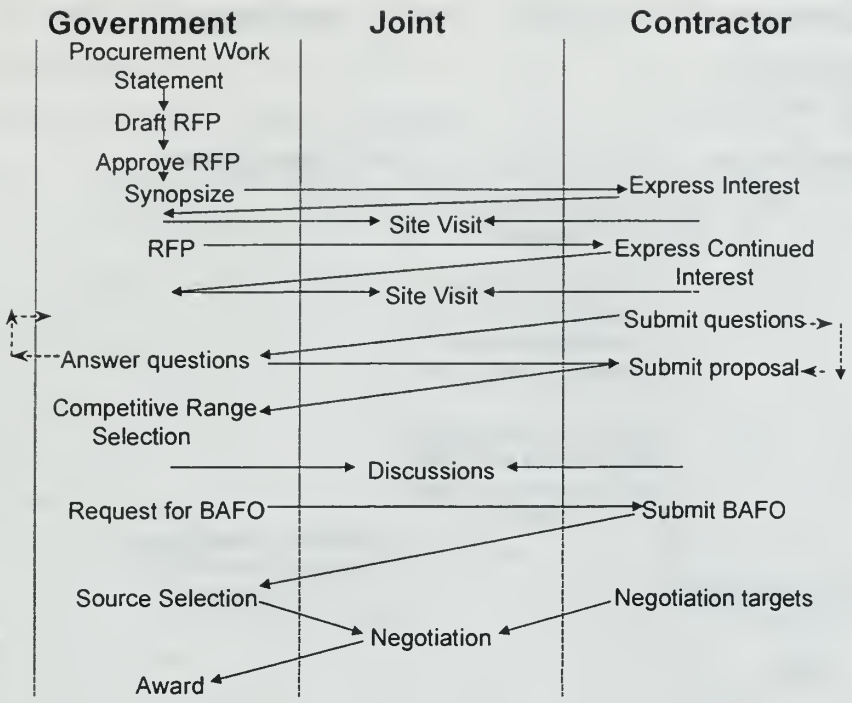

Figure 10. NTC Fort Irwin Service Contracting Process Flow [Ref. 25]

with the selected contractor and the contract is then definitized.

8. Special Programs Office Eglin Air Force Base

The service contracting process at Eglin Air Force Base supports all needs for the Special Programs Office. The process is illustrated in Figure 11. It is currently used for sole-source service acquisitions. Notice this process is quite similar to the alpha contracting process discussed in Chapter II. The Eglin process scores a 3/9 or 0.333 jointness ratio.

The Eglin process is referred to as Review, Discuss and Concur (RDC) which was developed by the Air Force from the Eglin Special Programs Office [Refs. 9 and 10]. The process begins with a solicitation letter and agreement to conduct a RDC acquisition. Upon receipt of approval for a

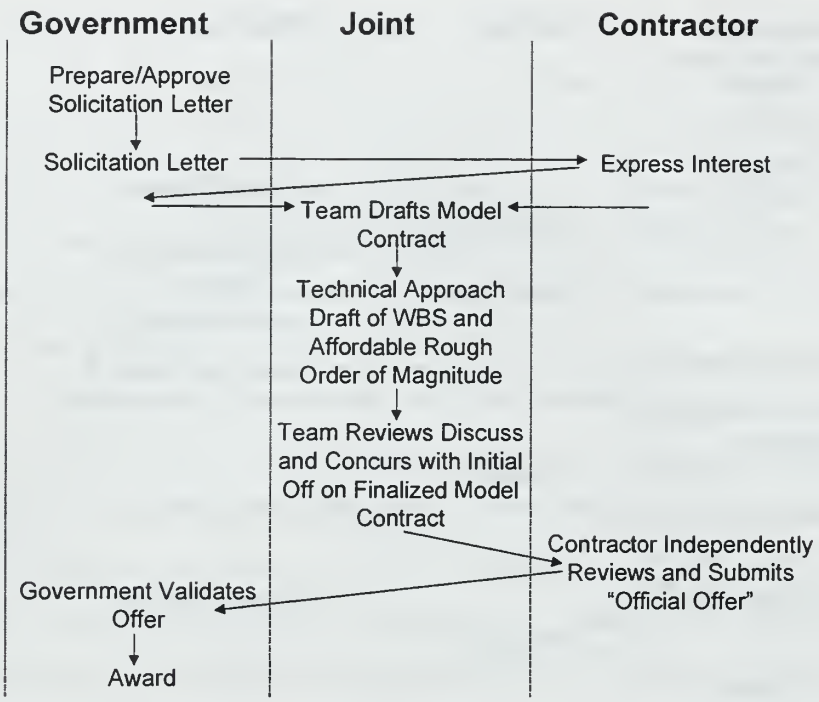

Figure 11. Special Programs Office, Eglin Air Force Base Service Contracting Process Flow [Refs. 9 and 10]

sole-source acquisition, the RDC team meets jointly to produce a model contract from which to base the rest of the process. The team produces the model contract to the maximum extent in person. If circumstances prevent in person communication, electronic information exchange is used to speed up the process [Ref. 9].

The joint team is comprised of counterparts from the Eglin and contractor organizations. At a minimum, representation from both organizations includes program managers responsible for requirements, contracting officers, and financial managers responsible for estimating supporting budgets. The initial model contract consists of anticipated statement of objectives, contract terms, incen-

tives and any other unique issues for the particular acquisition.

Next, the team decides on a technical approach to complete the statement of objectives and supports this technical approach with a work breakdown structure. This step includes agreement on definitions, assumptions and a computation of rough order of magnitude cost for the project. The next step is concurrence. As the name implies, this step is complete when the RDC team reviews, discusses and concurs on the finalized model contract.

Differences in RDC from the alpha approach can be seen from this point forward. The RDC team forwards the finalized model contract to the contractor. The contractor *independently* reviews the model and submits an official offer to the Government. The Special Program Office team validates this official offer and the contract is awarded.

9. Jointness Ratio Comparison

Table 2 is presented for the benefit of a summary comparison of the processes discussed in Chapter II and III. The processes are listed in descending order of jointness ratio. Notice the processes measured with high

Process	Rank	Ratio	Percentage
Alpha	1	4/9	0.444
Eglin AFB	2	3/9	0.333
NTC Fort Irwin	3	4/19	0.211
FISC San Diego	4	3/15	0.200
MCRD Parris Island	5	3/16	0.188
MCLB Albany	6	3/18	0.167
Camp Pendleton	7	2/14	0.143
MCRD San Diego	7	2/14	0.143
Traditional Sole-source	7	2/14	0.143
SPAWAR	8	2/16	0.125

Table 2. Comparison of Jointness Ratios

joint ratios also tend to have fewer steps, particularly the model alpha process and its RDC counterpart performed at Eglin.

D. ENABLERS AVAILABLE TO STREAMLINE THE SERVICE CONTRACTING PROCESS

The DoD service contracting process has two purposes. First, the user should receive services that satisfy all requirements. Second, these service requirements should be acquired at the best value possible to the Government. There are both technological and human enablers available to streamline the DoD service contracting process. Results of discussing the service contracting process with interviewees produced four such enablers. The four enablers, discussed below, are the World Wide Web, training, statement of objectives, and alpha contracting. Each of these enablers appears to be particularly promising in terms of service contracting innovation.

1. World Wide Web

Many companies today place their products, concepts and services available for public view via the World Wide Web (Web). This ever increasing database provides a central source for listing and accessing a wide variety of current industrial practices. With this, the Web represents an effective tool to quickly obtain current market research data [Refs. 1, 5, and 30]. The Web allows the Government the ability to compare service requirements to practices currently being used in industry. An RFP developed with industry practices in mind enables offerors to better understand Government requirements and the user to receive the most prevalent services available [Ref. 1].

2. Training

Interviewees describe training as an enabler involving three separate groups:

1. Users

2. Contract Specialists

3. CORs

As discussed above, service contracting has unique difficulties for users that must communicate requirements. Part of the difficulty stems from translating conceptual requirements into the written requirements of the RFP. Since users represent the focal point in determining requirements, training them how to communicate effectively is important [Ref. 3]. Major Neuberger, from MCRD San Diego, recommends getting the biggest users together to teach them both the pitfalls of a weak SOW and how to properly prepare a good SOW [Ref. 38].

Training is also important with the contract specialist since there are unique requirements when drafting a service contract. Mr. Nobes of MCLB Albany believes, "Training is key. You must grow one of your contract specialists into a service contracting expert. Focus a particular specialist only on contracting for services." [Ref. 41]

Mr. Brooks, Deputy at MCRD Parris Island, believes training the COR is just as important to a successful service contracting process. He states, "ensure the COR is well trained to understand not only the contract but school trained in the FAR and DFARS in the particulars to services." [Ref. 5]

3. Statement of Objectives

Lt. Col. Henry from NTC Fort Irwin believes one way to improve the service contracting process is to "improve the Procurement Work Statement (SOW) to focus on the requirements, not how the contractor accomplishes those requirements [Ref. 25]." A Statement of Objectives (SOO) therefore can be an enabler to improve the service contracting process when used in place of a SOW [Ref. 18].

A SOO provides potential offerors flexibility in developing cost-effective solutions. It also provides the opportunity to propose innovative alternatives in meeting those objectives. Use of a SOO vice a SOW eliminates the instructions on what activities the contractor must perform to provide the services, but rather focuses on the end state delivered. "Industry can be more innovative [than the Government]. People in industry often already know a way to accomplish the task" [Ref. 38]. It is important to note that a well written SOW may also provide the opportunity for a contractor to determine "how" a requirement should be performed. A SOO, however, is a higher level document, conceptual versus specific requirement example of what is expected as the end state deliverable. The focus is on the objectives instead of what steps to perform in the accomplishment of work, maximizing contractor innovative latitude.

4. Alpha Contracting

The alpha contracting process itself is an enabler available to streamline the DoD service contracting process. The focus of alpha contracting is to both decrease process cycle time (PALT) and encourage contractor

interfaces to best support user requirements. This technique has been proven in sole-source hardware acquisition. As with hardware acquisition alpha contracting is also an enabler to streamline the service contracting process. [Refs. 10, 14, and 27]

E. REDESIGNING THE BASELINE SERVICE CONTRACTING PROCESS

This section demonstrates process flow changes when redesigning the service contracting process inclusive of alpha contracting concepts. The alpha contracting concept applies to any of the service contracting processes described above. For the purpose of demonstration, the Parris Island process depicted in Figure 8 is considered a "baseline" process for discussion of process redesign. The Parris Island process is chosen since it is the median process, by jointness ratio, of the eight separate service contracting process flows in Chapter III. Additionally, with the exception of Eglin, the Parris Island process contains many of the contracting steps in the other contracting flows. The Eglin RDC process is of course already similar to alpha contracting.

Figure 12 depicts how alpha contracting can be employed to the redesign of the Parris Island process. The redesigned Parris Island process is referred to as the "Figure 12 process" throughout. The Figure 12 process is used for analysis in Chapter IV.

Redesigning Parris Island service contracting as an alpha process moves preparation of the SOW to the joint category. The same alpha IPT members discussed in Chapter II also participate in this redesigned process. Where appropriate, the COR is an additional IPT member to ensure

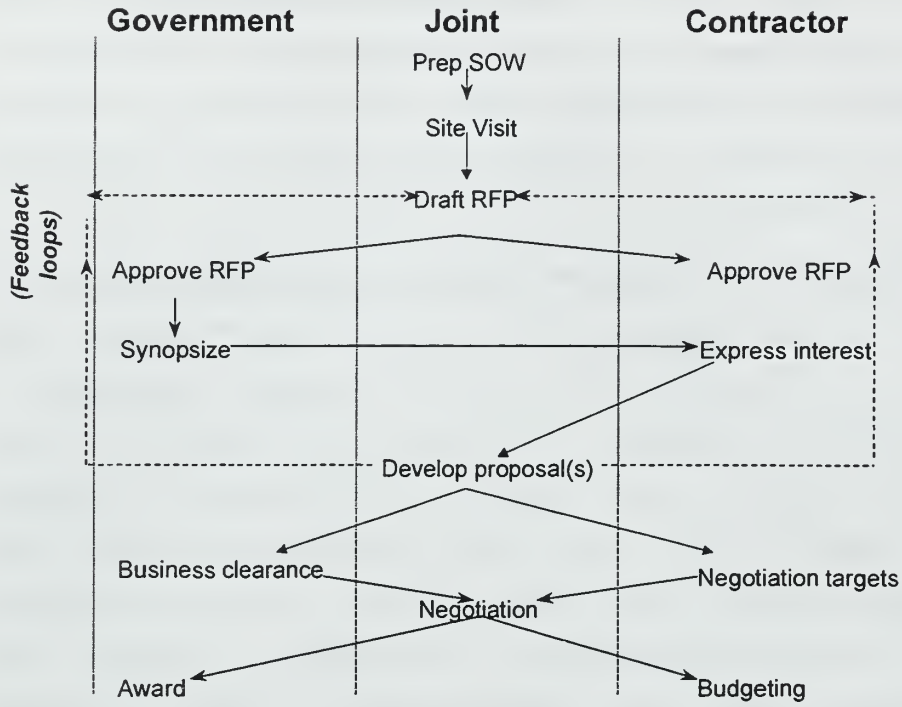

Figure 12. Parris Island Redesign Process Flow

better understanding of compliance during contract administration.

Notice in Figure 12, a joint site visit takes place followed by the IPT jointly preparing a draft RFP. The Government and contracting organizations next approve the RFP. The Government synopsizes the contract and the offeror expresses interest. The proposal preparation, negotiation and award are similar to the alpha contracting process discussed in Chapter II.

Analyses, or conclusions in this thesis, based upon the Parris Island redesign, are of similar effect to the other eight processes discussed in Chapter III. Contracting officers from other commands that contract for services should also expect this analysis to apply to the respective service contracting processes.

F. SUMMARY

Results from interviews and literary research indicate that there are unique aspects found in contracting for services compared to other contracting areas. Much of this uniqueness stems from the difficulty of determining service requirements and the method in which these requirements are communicated to every party involved in the service contracting process.

Each of the eight processes discussed above is in place to deliver quality services to the user in a timely manner at the best value to the Government. Except for the Eglin process, all contracting process flows more closely replicate the traditional model, discussed in Chapter II, than the alpha contracting model. The processes, except for the Eglin model, use an "over the fence" method of communication and have few joint steps.

In order to innovate a process, it must first be fully documented and understood [Ref. 12]. For this purpose, Chapter III documents a diverse mixture of DoD service contracting processes. The outcome of the documentation provides the Parris Island process as a baseline to innovate through application of the alpha contracting technique. Chapter IV next provides an analysis of the application of alpha contracting to the service contracting process.

IV. ANALYSIS OF APPLYING ALPHA CONTRACTING TO INNOVATE THE SERVICE CONTRACTING PROCESS

Contracting for services becomes increasingly important as the DoD moves towards the twenty-first century. With industry leading technological development, new technologies for supplies, weapon systems, and services are moving rapidly forward. DoD is concurrently turning to this industrial base to perform not only traditional services but also to conduct functions previously performed internally. A full understanding of service contracting therefore is imperative. For reasons such as these, analysis of innovating the service contracting process is essential to both future user satisfaction and the Government receiving the best value for the services acquired.

Chapter III provides an understanding of service contracting and an example of a redesigned process (Figure 12) adopting alpha contracting techniques. This chapter builds on the Figure 12 process and alpha contracting concepts to further analyze innovation of the alpha contracting technique. The chapter is organized into five sections. The first two sections discuss positive implications and potential inhibitors to applying alpha contracting in the service contracting area. Specific ways to address these potential inhibitors are also discussed. Next, this chapter analyzes qualities of the acquisition environment that add to the success or failure of applying alpha contracting to a particular acquisition of services. Finally, a summary of the Chapter IV analysis is presented.

A. POSITIVE IMPLICATIONS

Positive implications are factors in the application of alpha contracting to the service contracting process that provide an increase in process performance and efficiencies. Five positive implications are associated with alpha service contracting: understanding the requirements, teaming, writing the contract documents, early support from external agencies, and decreased cycle time. These are discussed in turn.

1. Understanding the Requirements

Chapter III discusses requirement understanding, by both the user and each potential contractor, as one of the unique difficulties involved with the service contracting process. Often users can not fully explain the services needs, nor can users explain every detail necessary to satisfy the requirements. Alpha contracting allows the user, contracting officer, and potential contractor to communicate in person for better understanding of each requirement. Alternatively, the "over the fence" method, used in the baseline service contracting process, suffers from varying individual interpretations of written requirements in the contracting documents. Face to face interactive dialogue in the alpha service contracting process allows for better understanding of service requirements than is generally possible through traditional contracting methods. In particular, the teamwork depicted in the Figure 12 process allows an opportunity for a user, who is not completely sure of the requirements or the best method to accomplish the services, to interactively dialogue with the industrial expert to specify and refine the service requirements.

2. Teaming

Often a potential contractor's primary objective is earning a profit and the Government's primary objective is attaining quality product or service at a fair price. This can lead to conflicting objectives and opposite desires for the end state of the service contracting process. The IPT concept in alpha contracting may not (and arguably should not) change these ultimate organizational objectives. However, it can establish an environment for individuals on both sides to understand the basis for each organizational objective. Alpha contracting provides a group framework to spark a teaming environment between the Government and industry. The joint alpha IPT agreement to work together, from the identification of service need to contract definition, provides an opportunity to draw the opposite end objectives together.

The teaming environment may also encourage individual companies that are not currently interested in contracting with the Government (due to bureaucracy, small business with no Government contracting experience, etc.) to consider such contracting. Alpha contracting in a service environment such as this allows the team to move through the process together and build needed trust for a successful service acquisition.

3. Writing the Contracting Documents

The difficulty of writing the contracting documents to cover a service acquisition is discussed in Chapter III. In particular, administrative difficulties of the COR determining acceptable performance of services in quantity and more importantly in quality based on the SOW are noted. In the baseline method, the contracting officer needs to

understand the user's written service request to write the RFP. The contractor in turn needs to understand the contracting officer's RFP. Further, the contracting officer and eventually the COR need to understand the accepted proposal. The Figure 12 process of writing the SOW, RFP, and proposal in a joint environment allows all team members not only to discuss each particular element of the contracting documents but to better understand how to perform the work specified in the SOW. The outcome of the alpha contracting process, therefore, provides a well understood document from which the contractor can operate and from which the COR can discern service compliance.

4. Early Support from External Agencies

The joint IPT in the alpha contracting process includes individuals needed from supporting agencies. As stated in Chapter II, examples are DCAA, DCMC and Legal. Early incorporation of these agencies provides a base for well founded punctual decisions within the IPT. The individual expertise included from the beginning of the process saves time and frustration from potential changes later in the process without early support from such external agencies. For example, a lawyer as an IPT member of the alpha contracting process may alleviate a request for clarification from legal council for every contractual legal question, since the council is an alpha team member from the start.

5. Decreased Service Acquisition Time

As is the case in acquiring hardware, use of alpha contracting for a service acquisition should facilitate a decrease in cycle time or PALT. There are time savings

associated with using a person to person medium of communication vice deciphering written contractual documents. Since documents are produced jointly there is also obvious time savings from not transferring documents "over the fence" from the Government to the contractor and back. Another aspect of decreasing cycle time stems from including external supporting agency individuals in the alpha IPT. Including external agencies prevents the linear handoff of contract documents to and from the external agencies and the inevitable time of the document sitting on a busy, and possibly overburdened, individual's desk.

B. POTENTIAL INHIBITORS

Potential inhibitors in the application of alpha contracting to the service contracting process are factors that repress, discourage or reduce the potential gain from this process innovation. Five potential inhibitors are discussed in turn: resources constraints, resisting the change, loss of control, competition, and training.

1. Resources Constraints

Though the alpha contracting process can greatly decrease cycle time, it requires dedication of ample resources early in the contracting process. Dedication of Government and contractor personnel, time, and manpower is crucial to successfully perform alpha contracting. This problem compounds with the Government experiencing a shortage of contracting personnel, especially those with service contracting experience [Ref. 18]. CDR Qua, Head of Contracting, FISC San Diego, believes the biggest inhibitor to alpha contracting in the service contracting area is that there are "not enough personnel to develop each service procurement under an alpha contract" [Ref. 45].

There are also potential manpower problems for the contractor. Kelly Hough, a SPAWAR contracting specialist, states:

> With the competitive nature of service contracts many go to small disadvantaged businesses. These companies have fewer resources to devote to a single contract action with the type of up front involvement which is needed in an alpha acquisition.

2. Resisting the Change

As discussed in Chapter III, the customer often does not fully understand requirements in a service acquisition. With this in mind, there is possible resistance from a customer who already does not understand the requirements or the traditional contracting process to also understand the alpha contracting concepts seen in the Figure 12 process. Joe Escalara, contracting officer at FISC, San Diego, believes that even in the face of acquisition reform, both the customer and many contracting personnel are "hesitant to shift to a paradigm of open conversation with industry or totally sharing contracting information" [Ref. 18]. This resistance to the alpha contracting process can be further seen with smaller industry contractors that may be less comfortable with a new process than the traditional contracting method [Ref. 10].

3. Loss of Control

The Government and many industrial corporations have rules and regulations to maintain control of the traditional service contracting process. A Government example of control would be approval above the contracting officer level before release of the RFP. For a contractor, such control may include executive level budgeting

decisions at each contracting step. Many of these controls are lost in the alpha process when IPT members are empowered to make decisions and create contracting documents in person, without consent from upper levels at each alpha contracting process step. While upper management can still provide overarching policy guidelines such as a pre or post business clearance, these policies take away from the very spirit of team empowerment instilled in an alpha acquisition. This loss of upper management control at the IPT level over the alpha process can cause concern within an organization.

4. Competition

When attempting to acquire services through alpha contracting in a multiple-source environment, competition itself may inhibit the alpha process. Contractor trust and cycle time are two direct aspects of competition possibly inhibiting the alpha contracting process. Trust is an inherent necessity for the alpha contracting process to work. Contractors in a *competitive* environment may not want to give up their best ideas for accomplishing the service requirements until they know that they are *the selected contractor* for the service contract. There is concern from the contractor that its ideas will be shared with other contractors in the alpha process. [Ref. 25] The alpha process is very much one of sharing information, whereas the competitive concept, with separate proposal submission, is not.

Another inhibiting aspect of competition to the redesign process is the increase to cycle time. CDR Qua states:

> If you are working with four separate contractors to produce a service contract you are going against the whole concept of an alpha acquisition. With an alpha acquisition you want to decrease PALT. The complications involved in working with more than one contractor towards an alpha acquisition will increase PALT. [Ref. 45]

5. Training

As stated in Chapter III, contracting specialists require a great deal more training to be efficient in service contracting. The alpha contracting process, with an IPT concept, requires additional training for the already burdened contract specialist. In a smaller command this additional training may prove too much for the high paced workload [Ref. 38].

C. ADDRESSING THE INHIBITORS

Entire theses may be dedicated to addressing each of the inhibitors discussed above. This section contains analysis based on interviews and literary research on how organizations may overcome some inhibitors to the alpha service contracting process. The inhibitors addressed include resource constraints, resisting the change, and loss of control. Competition is not discussed due to the extended research necessary to properly overcome this inhibitor. Training on the other hand is not discussed since the inhibitor is trivial, simply train the appropriate personnel.

1. Resource Constraints

Government and industry contracting parties need to look beyond the short term (time and manpower) resource constraints of alpha contracting and think in terms of return on investment. Long term benefits available from

the redesigned service contracting process (e.g., the Figure 12 process) for the customer, contracting personnel and contractor can greatly outweigh the short term cost and constraints of alpha contracting. Also, technology can address some of these short term resource constraints. Video-teleconferencing for instance, combined with a Web page, enables even geographically distant IPT members to meet jointly, without the additional time and cost involving travel. In addition, using a Web site allows IPT members to view the same documents and immediately update these contracting documents, and it allows others in the redesigned process (not necessarily a part of the IPT) to also view the contract documents. The combination of video-teleconferencing and such a Web site allows the benefit of an in person medium of communication combined with the benefit of time savings due to decreased travel. If there are concerns about security, the team uses a secure Web site with password entry.

2. Resisting the Change

The key to overcoming the resistance to change is education at every level of the organization. The customer, contracting personnel, and contractor all need education on DoD reform and how this reform now allows the traditional service contracting process to be streamlined into an alpha type process. All parties involved should research current changes in the FAR, acquisition reform, process streamlining through alpha contracting, and like events. DoD and service specific Web sites provide a readily available source of information on these reform topics.

Resistance to change is not a new concept to DoD acquisition. Major Neuberger, Director of Purchasing and Contracting, MCRD San Diego, believes the resistance to change with alpha contracting in the services area can be overcome. He parallels this resistance to other changes with his contracting personnel. He states "With SAT requirement changes, once personnel understand how easy the new requirements are and the benefits they receive using the SAT procedures, they liked the new SAT procedures." [Ref. 38]

3. Loss of Control

To address loss of control, organizational leaders and managers that lose some control due to a breakdown of traditional rules in the alpha service acquisition must agree, at their level, to move forward with alpha contracting. Leaders at the level of Head of Contracting or Vice President of Contracting must "buy in" to the alpha contracting process. The organizational benefit of the alpha process needs to be explained to the leaders at this level. "Buy in" is obtained by presenting overall time savings followed by faster contract definition, which leads to earlier profit flow for the contractor and user satisfaction for the Government.

D. DETERMINING THE SUCCESS OR FAILURE OF ALPHA CONTRACTING IN INNOVATING THE SERVICE CONTRACTING PROCESS

The purpose of this section is to create a template for analysis by a contracting officer, program manager or acquisition professional to determine if alpha contracting is compatible with a specific service acquisition or organization. The template for analysis is in the form of a decision matrix. A particular acquisition is listed as a

row in the matrix and various decision factors are listed as columns. The researcher, through literary research and interviews, assembles factors that exemplify the success or failure of alpha contracting in a service acquisition. Two classes of factors are discussed: acquisition environmental and organizational. Factors of the acquisition environment are elements that illustrate and characterize a specific service type procurement. Organizational factors are elements describing the whole buying or procurement command, its structure or its relationship with industry.

Table 3 summarizes the acquisition environmental factors and factor definitions. Table 4 summarizes organizational factors and definitions. The factors listed in Tables 3 and 4 appear in relative priority of each factor's importance to the success of the alpha contracting process. These tables provide information for further analysis in Chapter IV.

Factor	Definition
1) Uniqueness	Whether the requirement is the only one or the first ever one of its kind (i.e., Jupiter Pathfinder service technician)
2) Priority	Whether the requirement is needed now or there is sufficient time to acquire the services
3) Number of Sources	Whether the particular acquisition is competed or has only one source for the service requirement
4) Consistency of Requirement	Whether the requirement is undeviating over time or rapidly fluctuates (i.e., computer processor architect)
5) Complexity of Requirement	Whether there is a single, simple requirement or interconnected intricate requirements (i.e., multiple personnel, multiple professions, synchronization)
6) Originality of Requirement	Whether this is a new requirement for the organization or the organization has previously acquired the services

Table 3. Service Acquisition Environmental Factors

Factor	Definition
1) Trust	Whether management and interactive personnel trust each other
2) Innovation	Whether the organization has a willingness to "step out of the box" and attempt new processes
3) Contract Volume / Dollar Ratio	Whether the organization has a relatively low ratio (small volume of contracts at a large dollar value) or a relatively high ratio (large volume of contracts at a small dollar value)
4) Alpha Experience	Whether contracting personnel and/or management has experience with alpha acquisition
5) Contracting Organization Size	Whether there are many contracting personnel within an organization or just a few
6) Vendor Base	Whether there is a large or small vendor base within the particular industry to provide needed expertise and services

Table 4. Organizational and Relationship Factors

Beginning with Table 3, the uniqueness of a particular acquisition depends on whether the service requirement has ever been acquired before, or the service is common within the DoD. The more unique the requirement, the better the use of industrial knowledge to enable requirement understanding and therefore, a more successful alpha acquisition.

The second acquisition environmental factor, priority, is how fast the user needs the services. The priority may be high or low. With a high or immediate priority there is a better chance of success when using the streamlined process of alpha contracting to quickly acquire the services.

Number of sources, from sole-source to multiple sources, is the third factor. Sole-source is currently

thought to be the best environment for an alpha acquisition. [Refs. 3, 5, 14, 24, 30, 38, 41, 43, and 48]

Factors four, five, and six all deal with the requirement itself. Consistency of the requirement is how often the terms or requirement needs fluctuate. For example, a requirement for the services of a computer programmer are less consistent due to changing types of computer code used, compared to the services of a dish-washer. The complexity of the requirement deals with the number of service requirements and how intricately connected they are. Going back to the computer programmer, he or she is only one simple requirement. Outsourcing the research and technology services to develop the atomic bomb, on the other hand, deals with complex, interconnected requirements. Originality of the requirement is simply if the particular service has been previously acquired by the contracting organization. The less consistent, more complex and more original the requirement, the more successful the application of alpha contracting due to the benefit of person to person teaming with industry for requirement understanding.

Trust is the first factor in Table 4 related to the contracting organization and its relationship with industry. This factor is representative of how well the organizations, in particular the individuals of the potential alpha IPT, trust each other. Trust is a key element to the openness needed to share information and allow the process to move swiftly forward.

Factor two, innovation, describes how likely the organizational management is to allow entry of a foreign process to its organizational culture. The more open an

organization to innovation, the more successful it is likely to be in alpha contracting.

The contract volume to dollar ratio pertains to the visibility of contract actions in an organization. If an organization has relatively few service contract actions at a high dollar value, a better chance of alpha contracting success is realized, because the organization can focus its resources on the few contract actions. Therefore, a relatively low ratio relates to alpha contracting success for the organization, verses a relatively high ratio. Similarly with the next factor, contracting organization size, the larger the number of contracting personnel in an organization the more likely the organization is able to converge personnel solely towards the particular alpha acquisition.

If there are personnel within the organization that have previous alpha contracting experience, the more likely success will be obtained when attempting an alpha acquisition. Alpha contracting is different than the traditional service contracting process. Therefore, personnel previously involved with an alpha acquisition add experience to the IPT. Furthermore, managers within an organization who understand the alpha concept through previous experience are more likely to accept the new process.

The larger the vendor base the greater the extent of industry knowledge on the service requirement. The more industrial knowledge on the requirements the better support possible for the alpha acquisition.

The factors described above (Tables 3 and 4) allow analysis not only of success or failure when using the

alpha contracting process at an organization but also analysis for a particular acquisition at a specific organization. Distinguishing these differences in factors is important for analysis. An organization may normally benefit from using the redesign process in its typical service acquisitions, but it may have a specific acquisition where the redesign process is not beneficial. The decision matrix is intended to assist the contracting officer or program manager in situations such as this.

Table 5 identifies eight hypothetical service acquisitions, which are taken from each of the process flows described in Chapter III. These hypothetical service acquisitions are presented as examples to *demonstrate* how a contracting officer or a program manager can analyze the potential for success of alpha contracting for their particular acquisition situation. These hypothetical service acquisitions are drawn from field interviews and represent a typical service procurement that one would expect to find at each of the eight organizations.

Organization	**Hypothetical Service Acquisition**
SPAWAR	Newly developed satellite systems engineering
MCRD San Diego	Base mess hall (cooks, servers, cleaners, etc)
Camp Pendleton	Base vehicle maintenance
MCLB Albany	CBIRF fast reaction biological cleanup support
MCRD Parris Island	Multi-year uniform tailoring
FISC San Diego	Multi-type ship repair
NTC Fort Irwin	Multi-year base instillation logistics
Eglin Special Programs	Aerospace engineer developing a critically needed unique airfoil design

Table 5. Hypothetical Organization Service Acquisition

The alpha contracting success or failure analysis begins with applying the factors described above to each of the hypothetical service acquisitions and organizations from Table 5. Tables 6 and 7 demonstrate the beginning of this analysis by creating two decision matrices. Notice that the "organization" column in Table 6 lists the eight hypothetical acquisitions from Table 5. The columns are populated with the corresponding acquisition environmental factors. The "organization" column in Table 7 depicts the same eight organizations. The corresponding columns are populated by the organizational factors from Table 4. Where necessary, the researcher has made logical assumptions to populate the matrices in this example (e.g., if the environment is sole or multiple sources).

Organization	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
SPAWAR	Unique	Lower	Sole	Changing	Simple	Original
MCRD San Diego	Common	Lower	Multi	Consistent	Complex	Returning
Camp Pendleton	Common	Lower	Multi	Consistent	Simple	Returning
MCLB Albany	Unique	High	Multi	Changing	Complex	Original
MCRD Parris Island	Common	Lower	Multi	Consistent	Simple	Returning
FISC San Diego	Common	Lower	Multi	Consistent	Complex	Returning
NTC Ft Irwin	Common	Lower	Multi	Consistent	Complex	Returning
Eglin Special Programs	Unique	High	Sole	Consistent	Simple	Original

Table 6. Service Acquisition Environmental Success Matrix

Organization	Trust	Innovate	Ratio	Alpha Exp	Shop Size	Vendor Base
SPAWAR	Yes	Yes	Low	Yes	Large	Small
MCRD San Diego	Yes	Yes	High	No	Small	Large
Camp Pendleton	No	No	High	No	Small	Large
MCLB Albany	No	Yes	Low	No	Small	Large
MCRD Parris Island	Yes	Yes	High	No	Small	Large
FISC San Diego	Yes	Yes	High	No	Large	Large
NTC Ft Irwin	No	No	High	No	Small	Small
Eglin Special Programs	Yes	Yes	Low	Yes	Large	Small

Table 7. Organizational Success Matrix

The acquisition environmental and organizational matrices (Tables 6 and 7) are next scored with a positive or negative evaluation to produce Tables 8 and 9. Each qualitative factor from the tables above is quantified by this score. The purpose of the quantitative analysis is to support decision making and rules for success or failure with the alpha contracting process.

For example, SPAWAR is listed in row 1 of Table 6. Factor 1 in Table 6 for this SPAWAR service acquisition (newly developed satellite systems engineering from Table 5) shows this acquisition to be "unique" (Factor 1 from Table 3). Because unique acquisitions represent a better environment for alpha contracting (see discussion above), this SPAWAR service acquisition factor is scored +1.0 in Table 8. Similarly, Factor 2 of Table 6 for this SPAWAR service acquisition shows this acquisition to be "lower" priority (Factor 2 from Table 3). Because lower priority acquisitions represent a worse environment for alpha contracting (see discussion above), this SPAWAR service acquisition factor is scored a -1.0 in Table 8. As a third

example, MCRD San Diego is listed in row 2 of Table 6. Factor 1 in Table 6 for this MCRD San Diego service acquisition (Base mess hall from Table 5) shows this acquisition to be "common" (Factor 1 from Table 3). Because common acquisitions represent a worse environment for alpha contracting (see discussion above), this MCRD San Diego service acquisition factor is scored a -1.0 in Table 8. The other scores in Table 6 are assigned in a similar manner. A similar procedure for scoring is used to create Table 9.

Organization	Unique	Immediate	Sole-source	Changing	Complex	Original	Total
SPAWAR	1.0	-1.0	1.0	1.0	-1.0	1.0	2.0
MCRD San Diego	-1.0	-1.0	-1.0	-1.0	1.0	-1.0	-4.0
Camp Pendleton	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-6.0
MCLB Albany	1.0	1.0	-1.0	1.0	1.0	1.0	4.0
MCRD Parris Island	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-6.0
FISC San Diego	-1.0	-1.0	-1.0	-1.0	1.0	-1.0	-4.0
NTC Ft Irwin	-1.0	-1.0	-1.0	-1.0	1.0	-1.0	-4.0
Eglin Special Programs	1.0	1.0	1.0	-1.0	-1.0	1.0	2.0

Table 8. Scored Service Acquisition Environmental Success Matrix

The longer the positive values in the Table 8 total columns, the better the chance of a successful alpha contracting acquisition. A longer negative number equates to a less likely chance of success. The total positive or negative range obviously changes with the modified factors of each particular acquisition. Notice that organizational factors can change over time in Table 9, vice change from

Organization	Trust	Innovate	Ratio	Alpha Exp	Shop Size	Vendor Base	Total
SPAWAR	1.0	1.0	1.0	1.0	1.0	-1.0	4.0
MCRD San Diego	1.0	1.0	-1.0	-1.0	-1.0	1.0	0.0
Camp Pendleton	-1.0	-1.0	-1.0	-1.0	-1.0	1.0	-4.0
MCLB Albany	-1.0	1.0	1.0	-1.0	-1.0	1.0	0.0
MCRD Parris Island	1.0	1.0	-1.0	-1.0	-1.0	1.0	0.0
FISC San Diego	1.0	1.0	-1.0	-1.0	1.0	1.0	2.0
NTC Ft Irwin	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-6.0
Eglin Special Programs	1.0	1.0	1.0	1.0	1.0	-1.0	4.0

Table 9. Scored Organizational Success Matrix

specific service acquisition to service acquisition demonstrated in Table 8. For example, any organizational schema may adjust over time to trust its counterpart in Government or industry.

The Tables show that based on the hypothetical acquisitions, MCLB Albany has the highest environmental success score (Table 8) and Eglin Special Programs has the highest organizational score (Table 9). Potential for alpha contracting success in this example is particularly high for this acquisition and organization respectively. Alternatively, the Camp Pendleton and MCRD Parris Island hypothetical examples have the lowest score in Table 8 and NTC Fort Irwin has the lowest organizational scores in Table 9. Alpha contracting offers the least potential for success in those environments and organizations. Drawing from Nissen [Ref. 40] we can offer another observation. If a total score is positive (e.g., greater than zero), one

should probably consider alpha contracting. Negative scores imply further evaluation.

There are no empirical data to support the conclusions of the decision models. The decision models are however based on intense research and analysis of field interviews. The conclusions drawn from the eight hypothetical service acquisitions do support the theoretical analysis presented thus far in the thesis. Future analysis is needed in order to verify the models through application of actual service acquisitions to the decision model factors.

E. SUMMARY

There are both positive and negative aspects when analyzing the application of alpha contracting to the service contracting process. Positive implications are entrenched around a teaming atmosphere of shared information and requirements understanding. Potential inhibitors focus on the short term resource constraints and in some cases the general fear or resistance to change. There are methods, however, of overcoming these potential inhibitors when the long term benefits of the redesign process outweigh the short term resource constraints.

Each organization and separate service acquisition maintains its own service contracting scenario to analyze the success or failure of the alpha contracting process. Contracting officers and program managers can self evaluate or audit their own service acquisition scenario and organization using the decision model developed and discussed above. Their self evaluation can be used as a baseline method for analysis of their success or failure with the alpha contracting process.

Chapter V discusses conclusions, recommendations based on those conclusions, and future areas of research.

V. CONCLUSIONS AND FUTURE RESEARCH

A. CONCLUSIONS

As discussed in Chapter I, the purpose of this thesis is to provide analysis of alpha contracting as an enabler to innovate the DoD service contracting process. Exploring this purpose, literary research and many personnel interviews with contracting professionals reveals unique aspects of service contracting. In particular, requirement determination and understanding are found to be unique. Eight separate service contracting process flows document an understanding of the processes currently in use for DoD service contracting. Comparative process analysis of these eight process flows allows development of a redesigned (Figure 12) process, inclusive of alpha contracting concepts, as a prototype model. Further analysis in Chapter IV provides both positive and negative aspects in the application of alpha contracting concepts to the service contracting process, as well as possible methods of overcoming the negative barriers discussed. The pinnacle of the Chapter IV analysis provides a decision model to assist acquisition professionals in determining the likelihood of alpha contracting success or failure. This decision model is sensitive to applying alpha contracting concepts to specific acquisition environments and organizations.

The aggregate evaluation summarized above when applying the alpha contracting concepts to the service contracting process is overwhelmingly positive. The culmination of literary research and numerous interviews supports that alpha contracting does innovate the service contracting process. Innovation implies radical improvement. In

Chapter II, Davenport describes an innovative process as one with "visible and dramatic results" that takes into account the "overall business objective" and then effects a creative and radical change [Ref. 12]. The overall objective of the service contracting process is to satisfy user requirements within a reasonable time at the best value to the Government. A redesigned, streamlined process, inclusive of alpha concepts provides a vehicle for not only accomplishing the overall objectives but with dramatic results of decreased cycle time and increased user satisfaction. Alpha service contracting takes an entirely different approach from traditional contracting methods. Applying alpha concepts to the service contracting process visibly changes the process by jointly accomplishing key contracting steps. Alpha service contracting has a focus on open communication, a free flowing information atmosphere, trust, empowering IPT members to make decisions, and mutual understanding of the service requirements. Alpha service contracting therefore is truly innovative.

We can conclude that the use of a traditional method of contracting for services is prevalent throughout the DoD. In all organization process flows described in Chapter III, save one, service contracting is preformed through traditional, over the fence, documentation transferring processes. When the traditional contracting process is combined with service acquisition uniqueness, most importantly requirements understanding, it leads to greater risk of user dissatisfaction, difficulties in contract administration and Government-contractor relationship conflict. The streamlined joint Government and

contractor IPT concept found in alpha service contracting removes over the fence documentation transfer, encourages partnering, and has the potential to greatly decrease cycle time. Alpha contracting provides an excellent vehicle to gap the unique aspects of contracting for services and maximize the opportunity to satisfy user needs on time.

The Figure 12 process demonstrates how alpha contracting concepts are actually implemented to innovate the service contracting process. It is important to note that the research indicates that there is no reason that these concepts can not be generalized to or should not be implemented into any service contracting process. Implementation is accomplished by performing individual contracting steps jointly between Government and contractor empowered personnel vice performing steps separately via written documentation.

We can learn from this research that even the most efficient process provides opportunities for radical improvement under certain situations and conditions. Like any other process, the alpha service contracting process is not necessarily ideal for every service acquisition. The service acquisition environmental and organizational factors discussed in Chapter IV provide the basis for acquisition professionals to analyze each particular situation to determine the likelihood of success with a redesigned process inclusive of alpha concepts. It is therefore further concluded that the contracting officer, program manager, and acquisition professional *must self evaluate* their own service acquisition and organization *to determine* if the innovative approach to alpha contracting

is successful for *a specific* acquisition situation. Applying an understanding from self evaluation into the service acquisition environment and organization matrices, found in Chapter IV, enables a decision maker to asses the likelihood of success or failure of the alpha concept for each particular situation.

B. RECOMMENDATIONS

Based on the conclusions of this research, the following recommendations are made.

1. **DoD should provide guidance encouraging the use of alpha contracting for service acquisitions under the appropriate acquisition scenarios**. Guidance in the form of a top level memorandum should be drafted from the Defense Acquisition Executive to the Service Acquisition Executives. The focus of the memorandum should be a discussion of the benefits and possible inhibitors of applying alpha contracting in the service contracting area. This focus will not only assert awareness of the innovative practice of alpha contracting concepts for service contracting but will also provide an appreciation of concepts available to acquisition professionals above and beyond traditional contracting techniques.

2. **The decision on implementation of alpha contracting concepts to an organization's service contracting process should be made at the organizational level.** The contracting officer or program manager at the organizational level is in the best position to determine applicability of alpha contracting to the service contracting circumstance. Personnel at the organizational level have the best opportunity for organizational self evaluation of

their acquisition environment and organizational standpoint.

3. **Acquisition professionals should use the acquisition environmental and organizational factors with the accompanying decision matrices, found in Chapter IV, to determine applicability of alpha contracting to each particular service situation.** The factors and accompanying decision model in Chapter IV provide a starting point for analysis of not only a particular service acquisition but also of a determination for the acquisition professional of readiness in the organization for process change. An analysis of the organization acceptance to alpha contracting concepts should be accomplished prior to analysis of a particular service acquisition. Beginning the focus on the organization itself will increase the overall success when utilizing alpha contracting concepts to a specific service acquisition.

4. **Alpha service contracting should be implemented in situations where "8A" or small disadvantaged business programs become a sole-source situation.** Often with an 8A small business type set aside, the acquisition situation becomes a single source with very little contractor understanding of the Government contracting process. While alpha contracting in the past has been considered for only large dollar value, highly visible acquisitions, use of alpha contracting can improve understanding from the small business contractor who may have never before dealt with the Government contacting process. In this situation alpha contracting allows the contracting officer the ability to guide the contractor through this often difficult to understand, Government contracting process. Though a small

business usually implies fewer resources, a small business probably also have fewer concurrent contract actions. The benefits of contractor guidance in an alpha contracting environment may outweigh the dilemma of small business resource allocation.

5. **Alpha service contracting should be used as a vehicle to encourage contractors not currently interested in contracting with the Government to become involved in Government contracting.** Use of alpha contracting in this situation can increase the competitive industry base by adding potential contractors not usually desiring a traditional, over the fence Government acquisition process. The cooperative, partnering atmosphere combined with a face to face communication medium may draw new industrial competitors. The streamlined alpha contracting process can attract highly innovative and useful contractors beneficial to the Government, which are not currently keen on the Government's service business.

C. AREAS FOR FURTHER RESEARCH

During this study, the researcher found several areas that warrant further research. These areas of further research are presented first as a research question followed by a short discussion. Each area is discussed in turn.

1. ***How can the alpha contracting concept be implemented successfully in a competitive environment?*** Chapter IV discusses the possible difficulties the alpha contracting process may face in the light of competition. The difficulties are primarily resource constraints on the Government side and fear of sharing information without contract commitment on the contractor side. Research is

needed to redesign the alpha contracting process to include a competitive atmosphere. Contracting personnel at Eglin Air Force Base, Special Programs are currently embarking on similar research with a process they call Review, Discuss, Understand (RDU).

2. ***Are the benefits of increased competition greater than the resource costs of utilizing alpha contracting as a tool to attract contractors not currently interested in Government contracting?*** As stated above, the streamlined concepts of the alpha contracting process can be attractive to contractors not desiring the rigid Government policies in the traditional contracting sense. A cost benefit study is needed to determine if the benefits are worthy of implementing DoD policy towards the use of alpha contracting for such a situation.

3. **Can the commercial service support industrial base sustain complete and total contract outsourcing due to privatization of non inherent Governmental functions?** If DoD increases privatization of support services (e.g., base logistics, vehicle maintenance, etc.) there is greater demand on the commercial service support industrial base. A study should be conducted on how well this service base can maintain support and what, if any, is the saturation point for the service support industrial base.

4. ***What are the costs and benefits attributable to a long term service support partnership agreement between Government and a commercial contractor?*** An argument can be made that there is a cost savings available due to economies of scale and the long term financial security involved in a long term Government-contractor partnership commitment. The flip side of the argument is socioeconomic

and political issues from the Government partnering with one contractor for a long period of time. A study is necessary to assess the costs and benefits of such a partnership, its effect on the economy and its effect on the commercial industrial base.

5. ***What are the implications of contracting officers' use of the World Wide Web (Web) as a sole vehicle for market research?*** As discussed in Chapter III, technology such as the Web provides a possible enabler to the DoD contracting process. The Web is being used as a tool for market research and may even be used as the sole means of acquiring the necessary number of contractor price quotes to satisfy competition requirements for acquisitions under the SAP. A study is needed to asses how effective this use of the Web is and if use of the Web as a sole means of market research may inhibit competition.

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